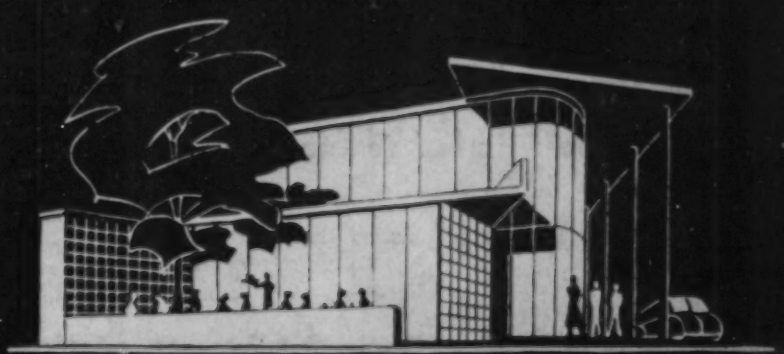
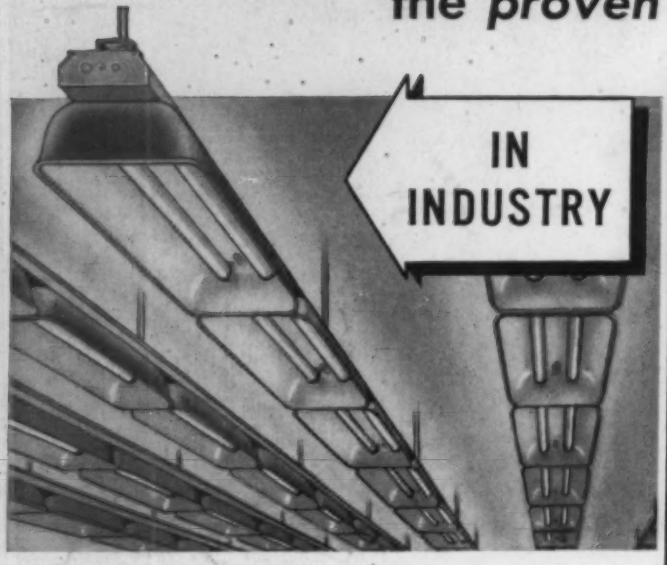
ARCHITECTURAL RECORD



RESTAURANTS • OCTOBER 1945

Relight with Confidence

the *proven** Miller way



Miller *Continuous Wireway* FLUORESCENT LIGHTING SYSTEMS

offer 6 important advantages

1. Best *seeing* light at lower cost
2. Modern appearance
3. 30 to 50% lower cost of installation
4. Reductions up to 80% in wiring material
5. Simplified maintenance
6. Special construction features

* The Miller Company has pioneered better lighting for 101 years.

Miller *Continuous Wireway* FLUORESCENT *TROFFER* LIGHTING SYSTEMS

offer the "basic 6" plus:

7. *New* Architectural aids
8. *New* possibilities in esthetic design
9. *New* architectural and structural versatility
10. *New* installation simplicity

Miller *50 and 100 foot candler* fluorescent lighting systems are known the world over. They were an important factor in winning our war of production.

Miller Fluorescent Troffer Lighting Systems (for stores, offices, schools and public buildings) have *already* opened new vistas in architectural design. They have *already* solved old structural problems—without creating *new* problems.

The Miller way to better lighting is the *known* way—the *proven* way—the way of no regrets.

Miller field engineers are conveniently located to serve you.

THE MILLER COMPANY • MERIDEN, CONNECTICUT

MILLER
SINCE 1844

ILLUMINATING DIVISION
Fluorescent, Incandescent
Mercury Lighting Equipment

OIL GOODS DIVISION
Domestic Oil Burners
and Liquid Fuel Devices

ROLLING MILL DIVISION
Phosphor Bronze and Brass
in Sheets, Strips and Rolls

WAR CONTRACTS DIVISION
War Materiel

FOUNDRY DIVISION
Non-Ferrous Metal Castings

ARCHITECTURAL RECORD (Vol. 98, No. 4, October 1945) is published monthly by F. W. Dodge Corp., 34 No. Crystal St., East Stroudsburg, Pa., with editorial and executive offices at 119 W. 40th St., New York 18, N. Y. $3 per year; Foreign, $5. Entered as second class matter, May 27, 1942, at the Post Office, East Stroudsburg, Pa., under the Act of March 3, 1879.

ARCHITECTURAL

RECORD

COMBINED WITH AMERICAN ARCHITECT AND ARCHITECTURE

VOL. 98 • NO. 4 OCTOBER • 1945

SEARCH AND RESEARCH ... 73
An Editorial . . . by Kenneth K. Stowell

ARCHITECTURE IN ARGENTINA ... 74
As Illustrated by the Work of Jorge Kalnay, Architect

CHURCH HEATING SYSTEMS ... 91
By Bruce C. Wenner and J. T. H. Anderson

WARTIME OFFICES AND PLANT IN REMODELED GARAGE 94
Monsen-Chicago Typography Plant, Chicago, Ill. James F. Eppenstein, Architect

A DISPLAY OFFICE FOR OVERALLS ... 96
Display Room and Offices for Blue Bell, Inc., New York City. Intramural, Inc., Designers; Daniel Schwartzman, Consulting Architect

DISPLAY ROOM FOR LINGERIE ... 98
Sales Offices for Chevette, Inc., New York City. Lea Epstein and Hans Weiss, Designers

BUILDING TYPES STUDY No. 106 . . . *RESTAURANTS* ... 101

WHAT RESTAURANT OWNERS THINK ABOUT ... 101
By James S. Warren

HIGHWAY RESTAURANT for a 100-octane world ... 102
Francis R. Keally, Architect

KITCHEN PLAN FOR HIGHWAY RESTAURANT ... 104
Arthur W. Dana, Restaurant Consultant

ANALYSIS OF RESTAURANT SPACE AND LAYOUT ... 105
Sumner Spaulding, Architect

FOR PLANE PASSENGERS AND PERSONNEL ... 108
Two Airport Restaurants for Sky Chefs, Inc. J. Gordon Carr, Architect

TAVERN DESIGNED FOR DOUBLE DUTY ... 111
Cafeteria and Tavern Combination, Alton, Ill. Hugo K. Graf, Architect

A SAGA OF RESTAURANT ARCHITECTURE ... 112
What a Restaurant Chain Operator Has Demanded of His Architects Over a 50-Year Span

NEW NOTES BRIGHTEN AN OLD NAME ... 116
Restaurant for John R. Thompson Co., Chicago, Ill. James F. Eppenstein, Architect

A STRAIGHT-LINE FEEDING SYSTEM ... 118
Restaurant for Linton's Lunch, Philadelphia, Pa. Israel Demchik, Architect

SEVEN SEAS RESTAURANT IN MIAMI ... 120
Igor B. Polevitzky and T. T. Russell, Architects

TIME-SAVER STANDARDS . . . Airport Kitchen Planning ... 122

THE RECORD REPORTS . . . News from the Field ... 7

FOR BETTER BUILDING ... 24
News of Materials, Equipment and Methods

MANUFACTURERS' LITERATURE ... 32

REQUIRED READING ... 128

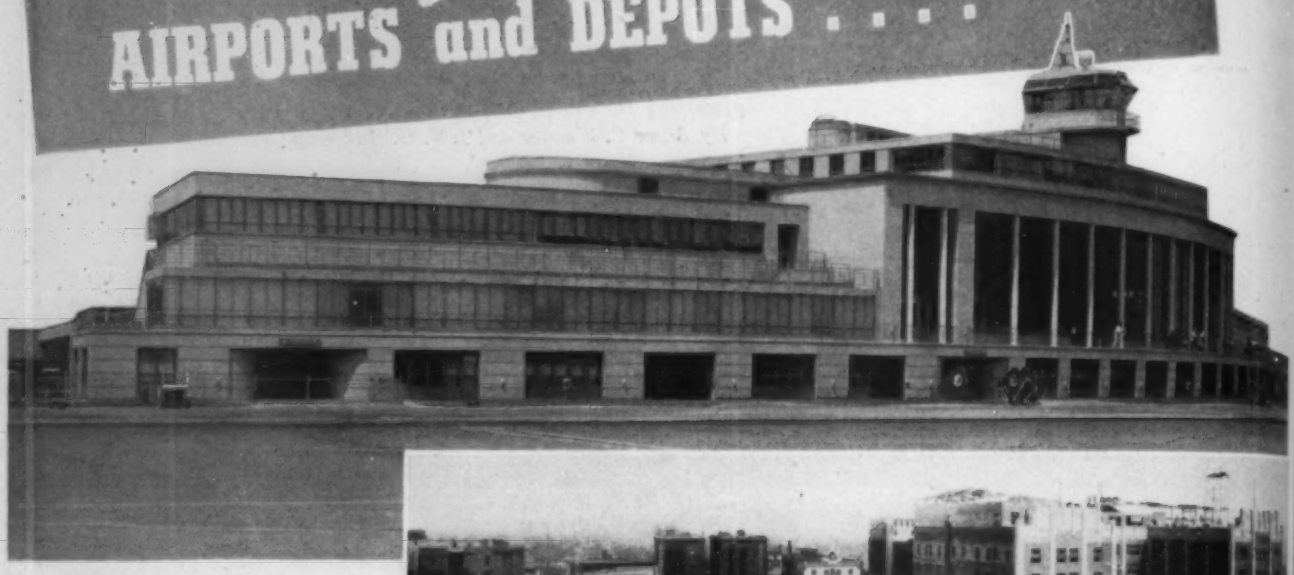
INDEX TO ADVERTISEMENTS ... 208

H. JUDD PAYNE, Vice-President in charge of Magazine Division • Copyright 1945 with all rights reserved F. W. DODGE CORPORATION

EDITOR-IN-CHIEF, Kenneth Kingsley Stowell, A.I.A.; Managing Editor, Emerson Goble; Associate Editor, Douglas Haskell; Associate in South America, Edmund J. Whiting, A.I.A.; Desk Editor, Florence A. van Wyck; Art Director, W. K. Allen. CONSULTANTS: Industry Relations Consultant: Thomas S. Holden. Statistical Consultant: Clyde Shute. Building Economics Consultant: Norbert Brown. Field Research Consultant: Clifford Dunnells, Jr.

Architectural Record (combined with American Architect and Architecture) is published monthly by F. W. Dodge Corporation, 34 No. Crystal St., East Stroudsburg, Pa., with Editorial and Executive Offices at 119 West 40th Street, New York, N. Y. Thomas S. Holden, Pres.; Howard J. Barringer, Vice-Pres. and Treas.; Irving W. Hadsell, Vice-Pres.; Chauncey L. Williams, Vice-Pres.; Sanford D. Stockton, Jr., Secy.; Walter F. De Saix, Asst. Treas.; Edwin H. Freed, Asst. Treas. Member Audit Bureau of Circulation and Associated Business Papers, Inc. Architectural Record is indexed in Reader's Guide, Art Index and Industrial Arts Index. Subscription rates: United States and Possessions, Canada, Cuba, Mexico, Central and South America, $3 the year, $5 for two years, $6 for three years; elsewhere, $5 the year; single copy, $1. Circulation Manager: Marshall Ginn. Every effort will be made to return material submitted for possible publication (if accompanied by stamped, addressed envelope), but the editors and the corporation will not be responsible for loss or damage. Other Dodge Services: Real Estate Record & Builders' Guide, Sweet's Files, Home Owners' Catalogs, Dodge Reports & Dodge Statistical Research Service.

Selecting FLUSH VALVES FOR AIRPORTS and DEPOTS . . . .



WASHINGTON NATIONAL AIRPORT, Washington, D. C., equipped with Watrous Flush Valves. Louis A. Simon, Supervising Architect. Howard Lovewell Cheney, Consulting Architect. Mehring & Hanson Co., Plumbing Contractors.

GREYHOUND-PICKWICK BUS TERMINAL AND HOTEL, Kansas City, Mo. Watrous-equipped throughout. Wright & Wright, Architects. E. D. Hornbrook, Plumbing Contractor.

A recent survey among architects widely experienced in the design of airports, railway and bus depots discloses some interesting trends in flush valve selection.

For example, there is a definite trend toward foot-operated flush valves for both closet bowls and urinals. Concealed flush valve installations are also favored by many. A summary of these trends is included in the booklet offered below.

Of course, a primary consideration in the selection of any flush valve combination is dependable, trouble-free *performance* — characteristic of all Watrous Flush Valves.

Very important also is *economy*. Here the simple Watrous Water Saver adjustment makes possible savings of many thousands of gallons of water each year.

Maintenance is another factor. This is simplified by the convenient, single-step servicing feature of Watrous Flush Valves.

Combine all these qualities in the flush valves for your new building or modernization program by choosing Watrous Flush Valves — a selection that will be a constant source of satisfaction over the years to come.

THE IMPERIAL BRASS MANUFACTURING COMPANY, 1240 W. Harrison St., Chicago 7, Illinois

ARCHITECTS' VIEWS ON FLUSH VALVE APPLICATIONS

A survey of interesting trends in the selection of flush valves for buildings is given in Bulletin No. 477. Write for your copy. See Sweet's Catalog for full information on Watrous Flush Valves.

Watrous Flush Valves

THE RECORD REPORTS

Home Building Expected to Seize Industrial Leadership • Construction Is Slow to Start • Supplies Remain Tight • OPA's Pricing Policy • How Much Industrial Building?

WASHINGTON is convinced that the economic future depends primarily on housing construction. It is on that industry, most of all, that government people place their hopes of high employment.

Long before the war ended, government men, like everybody else, were asking themselves and each other what could take the place of the $70 billion which war was contributing to annual national income. Economists in the various departments examined industry after industry. Industrial construction, their surveys showed, would be high but not high enough to insure against depression. The washing machines and toasters glamorously described in the advertising pages could not, by the wildest stretch of arithmetic, make much of a dent in the needed annual volume. The same conclusions were reached for trade after trade.

Home building was always singled out as the industry whose expansion might be sufficient to prime the next decade. First, both government and industry economists point out, a huge immediate market exists. Second, among the millions of veterans who will be demobilized within the next year, many will set up new households. Third, and perhaps most important, many industries depend on the housing trend—as builders push on into the suburbs, all sorts of utilities from transit to water mains go along; such industries as furniture, kitchen ware, linens, etc., base their own sales expectations on the housing forecast; the sales maps for practically every consumer line are revised when new homes are built.

Ground Floor in Housing

The expectation that home building will seize industrial leadership has stimulated the kind of reaction within government that is normal in business—everybody wants to be in on it. This generalization holds both in the executive departments and in Congress. Congressmen want to introduce helpful legislation. The officials on the executive side want to connect the work of their agencies, in one way or another, with the anticipated trend. So the capital is full of proposals of every kind—such as getting out of the way and letting the industry alone, setting up units to offer assistance, perhaps unwelcome, in cutting costs, granting subsidies, etc. That the government will have an important permanent place in the industry is suggested.

Government people are far less hopeful with respect to other classes of construction. WPB finds that industrial construction, privately financed during the war, is immediately useful, in the main, for peacetime production. The volume of such construction was sufficiently high, WPB officials think, to take a respectable slice out of prospective investment.

Department of Commerce, on the contrary, anticipates about $1.3 billion plant construction in the next year. More than a half billion additional alterations are planned. The estimate is based upon replies to a questionnaire sent to almost 7,000 companies. However, the very officials who worked up the figures are suspicious of them. In many industries, proposed expansions are triple and quadruple those of 1939. The government men wonder whether those responding to their questions lumped within one year programs which are more likely to unfold over two or three.

Office building construction, according to most forecasts, will be high only if the wartime inflation generates an era of prosperity like the '20s. In particular cities, notably the capital itself, business space is at a premium so that opportunities are obvious. The retail trades, which accumulated a good deal of money during the war and which normally build or remodel when they are prosperous, should follow their usual habits, it is thought.

Government officials expect large scale local public works to get started after home building has led the way. The local governments, it is pointed out, scaled down their indebtedness through the war and are able to sell their bonds at high prices. The dearth of schools, playgrounds, etc., in a great many cities brings frequent complaints to Washington.

Reasons for Delay

Peculiarly, the industry in which the most intense hopes are invested has been the last to get started. Among government officials this is attributed to normal business hesitancies—wonder whether better materials at cheaper prices will be available later, whether labor costs will decline, whether it will be possible to make better financial arrangements if building costs are cut, etc.—while the trade associations blame

(Continued on page 10)

"Well, that's Holland for you—what looks like a restaurant is only a windmill!"
—Drawn for the RECORD by Alan Dunn

Was the roof of tomorrow here yesterday?

These banks have sound assets on their roofs as well as in their vaults

All of these banks have Koppers Coal Tar Pitch and Felt roofs. Three of them are over ten years old and have proved so satisfactory that when the fourth—an addition to the main building—was planned, Koppers roofing materials were specified on that, too.

The banks' policy of advising their clients to invest in only the best, is reflected in their choice of Koppers Old Style Pitch and Approved Tarred Felt for their roofs. No better roofing materials than these have been developed throughout the years. That is why Koppers roofs will be the roofs of tomorrow as well as of yesterday.

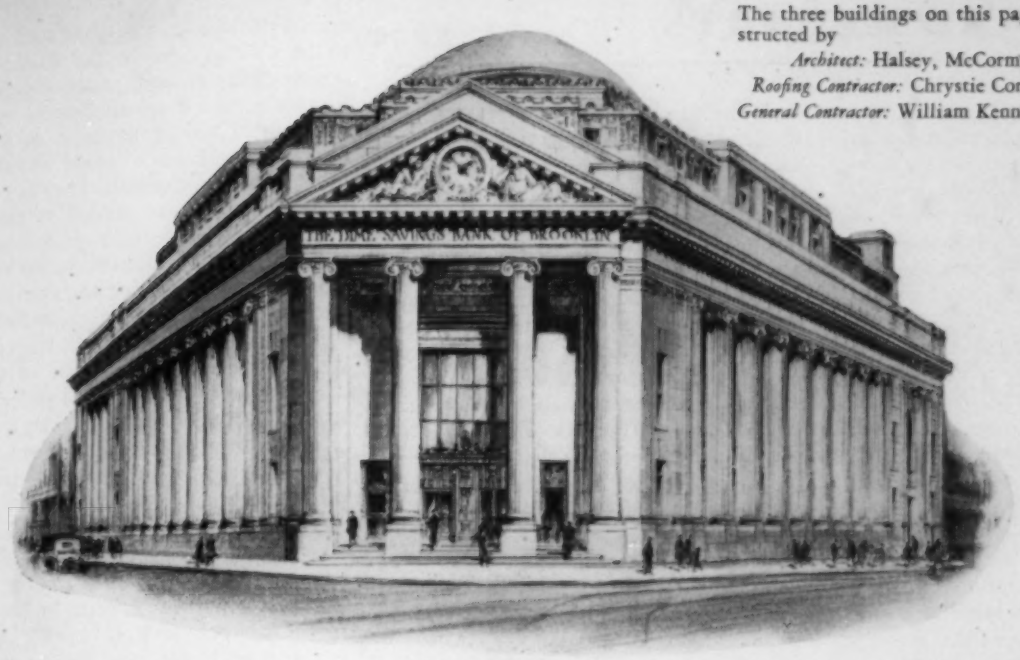
Specify Koppers roofing materials and create an "asset" for *your* customers.—Koppers Company, Inc., Tar and Chemical Division, Pittsburgh 19, Pennsylvania.

Refer to your Sweet's Catalog or write us for complete specifications.

Architect: Halsey, McCormack and Helmer, Inc.
Roofing Contractor: Brooklyn Roofing Corporation
General Contractor: Edward Corning Company

The three buildings on this page were designed and constructed by

Architect: Halsey, McCormack and Helmer, Inc.
Roofing Contractor: Chrystie Cornice and Skylight Works
General Contractor: William Kennedy Construction Co., Inc.

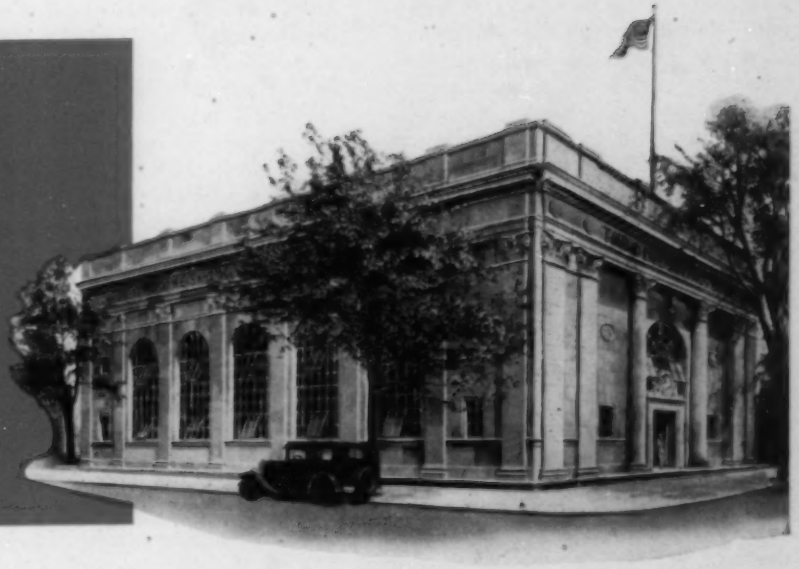


KOPPERS

coal tar built-up roofing

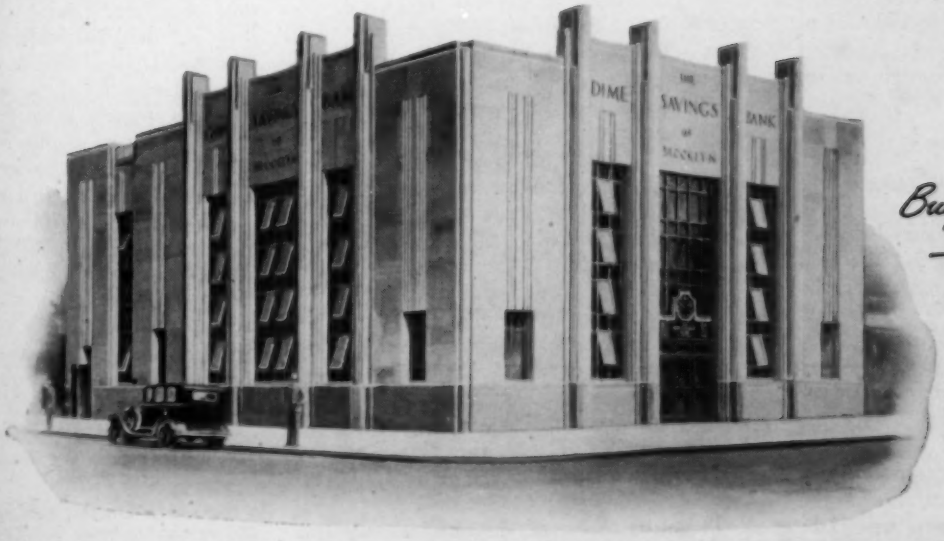
KOPPERS

coal tar membrane waterproofing



KOPPERS

The Industry that Serves all Industry



Buy War Bonds —and Keep Them!

 (Continued from page 7)

government bottlenecks.

The builders are most interested in $15,000 homes which, judging by transactions in existing dwellings, has become a popular price. They want, of course, to do a good deal of work in the $40,000 and $50,000 field as well, but to concentrate on the middle bracket.

Within the government there is a good deal of sympathy with the idea of letting them choose their own markets; this has been the point of view of Construction Coordinator Hugh Potter. Those who favor this view do not feel that satisfying the demand for moderate-priced dwellings will prejudice construction in the lower-priced field. NHA Chief Blandford, Chester Bowles and others want building in the low-priced range. They expect expanding needs in this field as veterans return home and as families, which postponed buying during the war because they were unsure of their permanent residences, decide that they are settled. Bowles, especially, wants additional houses in order to dull the pressure which he expects both on prices and on rentals—particularly since he doubts that OPA powers to control rents will last beyond next June.

In one way or another, officials expect, the government will try to squeeze building costs. They think that the Office of War Mobilization and Reconversion has the power to do so. The method which has been discussed most has been for building to be allowed only under federal permit and for such permits to be issued, in turn, only after NHA or some other agency has appraised estimated costs. Sponsors of this and like ideas have been working on the theory that the wartime increase includes a good deal of water. Aside from premiums on materials and components, they suggest that wartime delays in getting deliveries, in assembling and keeping workers, etc., wasted money. Builders and materials manufacturers see it differently.

Waiting for Springtime

There is little hope that ground will be broken except here and there, before spring. If so, the prospect held out by Blandford that 400,000 units will be built during the first year after victory seems the less likely to be fulfilled.

Information gathered by the government experts suggests that only minor changes in housing styles will come during the first flush of construction. For example, the plastics industry is successfully promoting interest in the expanding uses of their new materials. Stainless steel sinks have interested housewives. Materials for other fixtures may change; aluminum is especially aggressive. According to the compilations by the Department of Labor, about 80 concerns are in the prefabricated field and 120 more say that they will go into it. If it works out, it may supply some or much of the low-priced market which is of deepest concern to the government.

The deep interest of the government in the housing business probably improves the chances for passage of the Wagner-Ellender Bill, hearings on which were scheduled to get under way in mid-September. But every group which was preparing to support the measure intended to propose amendments. The unions, for instance, intended to ask for the clause calling for union pay-scales which Ellender refused to accept when the bill was being drafted. A battle over the drawing of race-lines in government-subsidized houses seemed likely. The bill guarantees 2¾ per cent, after depreciation, to insurance companies that build low rental projects—the rate may have to compete with 3 per cent which, according to present forecasts, will be available in a year or so on World Bank bonds. Just how purchases of slum-clearance land should be subsidized finds officials divided. These conflicting attitudes are all, so to speak, within the family. Proponents of the bill expect firm outright opposition from the most articulate building trade groups.

Supplies Still Tight

As to building supplies, lumber was one of the few to remain definitely tight after the war. Some metals almost at once ran into over-supply. Government estimates show that a substantial amount of lumber is being seasoned. The lumber industry was expected to acquire its needed labor forces quickly. Army surpluses of seasoned wood appeared to be less than for other materials.

It was generally doubted that shortages would persist. However, this was bound up, in part, with price questions which were debated even more violently than during the war.

When the war ended, the price structure for lumber and other building materials reflected wartime pressures rather than the normal balance of supply and demand. For example, the Army had been buying packing lumber primarily, so that the prices of Southern pine and Douglas fir had advanced, shadowed by OPA ceilings.

The usual point of view of industry and WPB officials was to do away with ceilings altogether. In the absence of ceilings, they argued, prices of packing lumber would drop or those of building lumber would advance; in either case, the two kinds of wood would fall into proper relationship. They felt that nothing more was needed to change the direction of lumber production.

OPA had a different attitude. It wanted to be sure that the corrections would come about through declines in the prices of materials no longer required rather than through advances for the others. So its general policy was to retain ceilings but to do away quickly with special premium payments that had been started in the earlier push for production.

The OPA theory, to take a particular case, was that the prices of Southern pine would quickly reflect the sudden loss of Army orders. In the absence of such orders, unsold inventories would pile up, Nature would take its course. Peacetime lumber, on the other hand, very likely would continue to press against the ceilings.

Discretionary Prices

The pricing agency fears that when construction gets under way this spring prices may boom. Consequently, although it is willing enough to change price relationships, it will not do it by simple abandonment of control.

In the case of other building materials, the general policy is to allow more or less discretionary pricing of items whose production had been held back during the war. Among the various insulation materials, for example, the less expensive products preferred by builders were selling at ceilings which OPA conceded were too low. Higher prices were granted on the theory that the resulting increases in production would reduce total costs for the builders, even though the prices of particular items had advanced.

The whole pricing policy is expected to come to a head next spring and in the building field particularly. Government economists feel that it will be apparent then whether the general direction of the economy is up or down. If the country is moving into higher production, Bowles feels price pressure will be felt most of all in construction. The decision at that time whether to continue or to dissolve OPA is likely to be determined, in large measure, by how things work out in the building field.

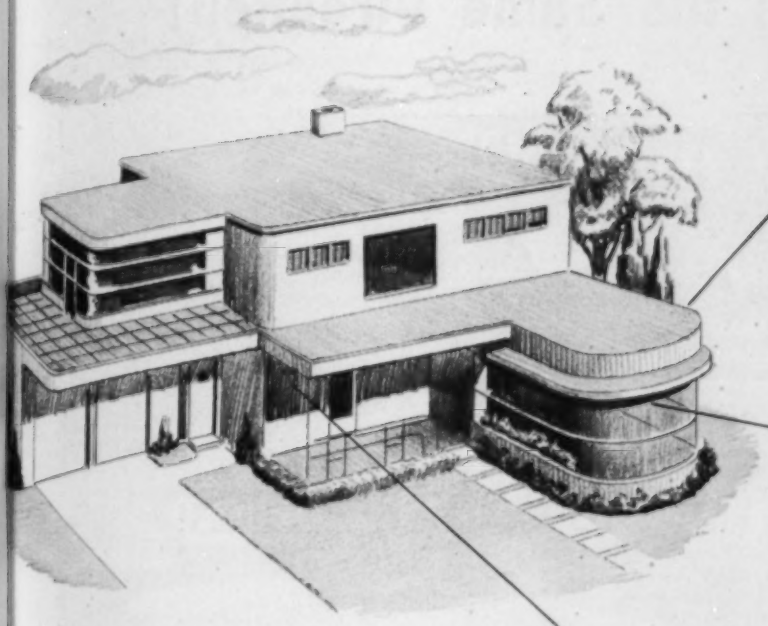
For that very reason, the different factions got their ammunition ready early. OPA and NHA itself devoted a good deal of attention to building costs. Representatives of the industry got ready to attack.

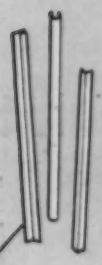
At one press conference, Bowles told

(Continued on page 13)

design for lasting appreciation with Dow plastics

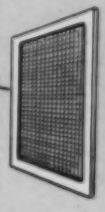
the finishing touch





ETHOCEL

Tough trimming material that absorbs hard knocks—takes rough handling. It's available in many attractive colors—transparent or translucent. Ethocel trim lends color and protection to corners, tables, and drainboards.



SARAN

Resistance to corrosion has won definite popular favor for screen made from Saran. Saran simply can't rust. There's no stain to mar painted areas. Colorful Saran fabrics also offer possibilities for interior decoration in built-in units.

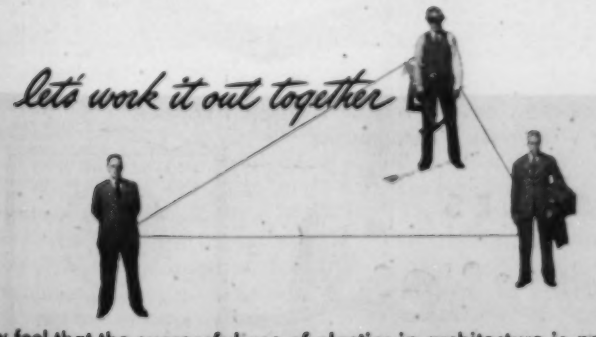
STYRON

Low priced plastic available in beautiful colors—clear, opaque or translucent. Styron is light in weight, yet dimensionally stable. Beautifully adaptable to modern designs in lighting fixtures and similar applications.

"START with the finishing touches," might be a cue to the proper use of plastics. These materials offer possibilities in design and decoration that may change your whole concept of a plan. Rainbow colors, modern patterns, new textures—all this means more than a dab of decoration. It means the finishing touch that is felt throughout the design and character of a building.

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago
St. Louis • Houston • San Francisco • Los Angeles • Seattle

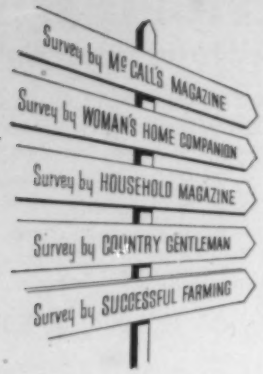


We at Dow feel that the successful use of plastics in architecture is not a one-man nor even a one-industry job. It calls for the combined skill and experience of architect plus fabricator plus raw materials producer. Working together, this team saves time and money and puts plastics to work successfully. Call us—we'll do our part.

DOW

PLASTICS

STYRON • STYRALOY • ETHOCEL • ETHOCEL SHEETING
SARAN • SARAN FILM • STRIPCOAT


Survey by McCALL'S MAGAZINE
Survey by WOMAN'S HOME COMPANION
Survey by HOUSEHOLD MAGAZINE
Survey by COUNTRY GENTLEMAN
Survey by SUCCESSFUL FARMING

All signs point in the Same Direction!

Wire Your Homes For Electric Ranges; Survey After Survey Shows That's What Women Want!

THERE's no doubt about it, women *prefer* the convenience, cleanliness, dependability and economy of *modern* electric cooking. And *you* can cash in on this preference by wiring your homes for Electric Ranges. Here's proof of the overwhelming trend toward electric cooking.

- WOMAN'S HOME COMPANION survey shows that *more* women plan to buy an Electric Range than *any other type!*
- McCALL'S MAGAZINE readers made the Electric Range their 2-to-1 "must have" choice in a recent contest.
- HOUSEHOLD MAGAZINE survey indicates that 3 times as many women want Electric Ranges as now have them.
- SUCCESSFUL FARMING survey shows that nearly twice as many REA consumers will own an Electric Range *after first two postwar years* as now have one.
- COUNTRY GENTLEMAN survey shows that among the upper two-thirds of white farmers, the Electric Range is the 2-to-1 choice!

And prewar sales figures further emphasize the trend: between 1933 and 1941, sales of Electric Ranges increased over 900%!

Cash in on this growing demand. Wire your postwar homes for Electric Ranges. Built-in, the cost of such wiring is negligible—the selling power tremendous.

Electric Range Section
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

A-B STOVES • ADMIRAL • ELECTROMASTER • ESTATE HEATROLA • FRIGIDAIRE • GENERAL ELECTRIC • GIBSON • HOTPOINT • KELVINATOR • MONARCH • NORGE • QUALITY • UNIVERSAL • WESTINGHOUSE

FOR EASIER SALES

Wire your houses

FOR ELECTRIC RANGES

THE RECORD REPORTS

(Continued from page 10)

newspapermen that he was afraid that the builders, who inclined toward high priced construction and who were not supporting his effort to hold down the prices of materials, would "price themselves out of the market." Bowles wanted them to aim at the low and medium brackets.

Public Building

The outlook for public building will be obscure for a while. On the one hand, the departments and agencies feel that a good deal of it is necessary to house the federal government. On the other, they do not want to build until the industry is ready. Moreover, after a long war Congress could not be expected to be in a spending mood.

So much for federal building. Municipal construction, according to the estimates made in Washington, will steadily rise, particularly if the United States is moving into a prosperous era. Informal surveys show that the needs for schools, playgrounds, etc., has greatly increased after so many years of virtually no building at all. At the same time, municipal bonds have been quoted at steadily rising prices so that financing generally can be undertaken without difficulty. Washington feels that the local governments are rich and will want to spend their money.

Industrial Construction

The amount of industrial construction getting under way is respectable but not enough to count in a big way. The automobile industry, according to a compiliation undertaken by WPB, plans $188 million before June, 1946, including equipment. Farm machinery companies expect $75 million; wood furniture, $9.5 million; refrigerators, $7 million, and washing machines about the same amount. Building in a great many other fields boosts the figure well about wartime levels, but not to a figure which is important to so great an industry as construction.

While additions to the industrial plant may not be made in great volume, government surveys do indicate a substantial amount of remodeling. This, of course, was to be expected. For one thing, a good deal of normal maintenance had been held back during the war notwithstanding WPB's generosity in rating materials for that purpose. It is now being made up.

The interpretation of the income tax law by the Department of Internal Revenue favors large scale remodeling. Under the carry-back provisions of the excess profits tax, companies are allowed to deduct postwar expenses from wartime incomes. One such expense is getting their plants back in prewar shape. Companies which want to improve rather than to restore their prewar layouts can do so: the government allows them to deduct at current costs what would have been the expense of actual restoration, less depreciation. Officials think that while industrial construction figures are modest, there is a good deal of improvement that takes the place of construction.

Sales of Equipment

The manufacturers of major building components look for markets far above prewar levels. Producers of warm-air furnaces, for instance, told WPB that they look for $14 million business next June as compared with an average monthly volume of $5 million before the war. They anticipate $8 million by December.

The stove makers expect $30 million in June against $18 million monthly before the war. The monthly average as the year ends will be $19 million. Advances in plumbing equipment production, on the other hand, will be low. Fitting and trimming fixtures will total $5 million in June compared with $4 million monthly before the war. Makers of cast iron fixtures don't expect to do as well as before the war. WPB's survey fails to cover public utility equipment.

Since the manufacturers gear their production schedules to the curve of housing construction, it is inferred that they will do well.

TELEVISION STUDIOS

Three complete television studios are to be installed in the New York main store of John Wanamaker. The studios will be operated in conjunction with DuMont television station WABD, New York.

The installation will include one large studio, 50 by 60 ft. in size with a 50-ft. ceiling, and two smaller studios as well as a telecine room housing a full component of television motion picture cameras, and facilities for art work, property storage, dressing rooms and extensive accommodations for "live" audiences.

The large studio will be equipped with four cameras, two of which are to be mounted on highly flexible dollies which will permit them wide ranges of elevation and camera angle. Three and two cameras, respectively, will be installed in the other two studios. Sliding, sound-proof doors will connect the three studios, so that all three may be integrated for major productions. A balcony around the

(Continued on page 14)

PREWAR SALES point the trend

1935 >>> 100%
1938 >>>>> 142%
1941 >>>>>>>>> 293%

Postwar Sales Will Triple Again

In the 6 pre-war years, sales of Electric Water Heaters almost tripled. And a 1944 survey made for NEMA* shows that *three times* as many women *want* Electric Water Heaters as now have them! They're "the coming thing," because they're:

SAFE—Flameless, fumeless

CLEAN—Smokeless, sootless

ADAPTABLE—Permits short hot water lines—Requires no flue or vent.

TROUBLE-FREE as electric light!

Installing Electric Water Heaters in every house you build, means giving women *what they want!*

Electric Water Heater Section
*NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

ADMIRAL • CLARK • ELECTROMASTER • FRIGIDAIRE • GENERAL ELECTRIC • HOTPOINT • HOTSTREAM • KELVINATOR • MONARCH • NORGE • PEMCO • REX • RHEEM • SELECTRIC • SMITHWAY • THERMOGRAY • THERMO-WATT • UNIVERSAL • WESTINGHOUSE

A House Wired For An Electric Range Is Already Wired For An

Electric WATER HEATER!

RELIABLY IDENTICAL GRADING *plus*

HI-DENSITY LEAD

IDENTICAL. The word needs no qualification when you're describing the uniform grading of Microtomic "Van Dyke" Drawing Pencils. More important . . . when you're *using* them. Pick up one pencil after another, of the same degree . . . you'll get the *same* weight line each time. *In addition*, "Van Dyke's" HI-DENSITY lead gives uniformly greater opacity . . . faster work . . . longer wear.

MICROTOMIC VAN DYKE DRAWING PENCILS

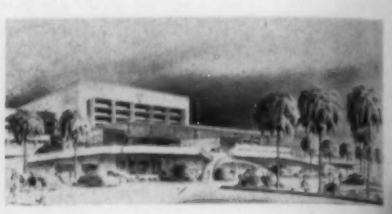
The EBERHARD FABER Drawing Pencil in 3 degrees, 7B to 9H — plus 6 degrees with special Chisel Point Leads

THE RECORD REPORTS

(Continued from page 13)

studio provides seats for 400 visitors and room for 300 standees. The control room overlooking the major studio will have a glass rear wall to permit shoppers and visitors to look in on daytime and evening rehearsals and broadcasts.

Installation of the studio began just after Labor Day, and construction is expected to be completed early in December.



Terminal for Panama's proposed airport

PANAMA AIRPORT

A new $7,000,000 airport to be constructed in Panama is being designed to accommodate planes half again the size of the B-29 Superfortress. Planes of this size, with a 300,000 lb. total gross load, are already planned for Pan American World Airways, Inc.

Facilities at the new airport will include a two story reinforced concrete terminal building, 625 ft. long, containing approximately 300,000 sq. ft. of space. The building will be air conditioned, will house restaurants, observation terraces and maintenance shops. F. H. McGraw & Co. of Panama are the architects and engineers.

ENTRANCE TO PUBLIC BUILDINGS

A program to open public buildings to the physically handicapped by eliminating such barriers as outside stairs has been inaugurated by the Architects Advisory Committee of the National Society for Crippled Children and Adults. The program makes seven specific recommendations:

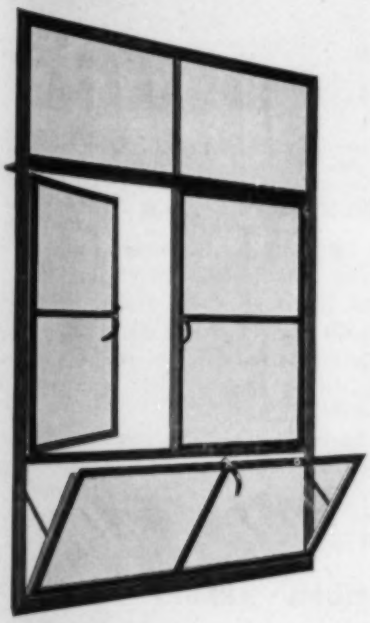
1. Eliminate outside steps to public buildings. Wherever there are flights of steps, provide a grade level entrance.
2. Wherever possible, place elevator adjacent to the ground floor entrance.
3. Eliminate steps inside buildings. If such is impossible, provide ramps.
4. Eliminate high curbs at street crossings through use of culvert.
5. Wherever steps cannot be elimnated, place hand rail on both sides of steps, the full length of flights.
6. In planning apartments, office buildings, schools, universities, factories, hospitals, churches and public

(Continued on page 130)

★ ★ ★ Mesker Steel Windows are ideal for *all* housing projects. Engineered specifically for large-scale projects, in conjunction with government and insurance company authorities, these windows are easily installed at low first cost, provide year-in-year-out minimum maintenance cost. Steel frame and inside casing, designed for utmost strength and durability, guarantee no costly splintering, shrinking and rotting . . . reduce plaster cracks...eliminate wood trim and plaster troubles. Simply storm sashed and installed, they assure perfect weathertightness, help conserve fuel. Blending artistically with any style architecture they conserve wall space, contribute to larger looking, brighter interiors by providing maximum glass area in a minimum of wall space.

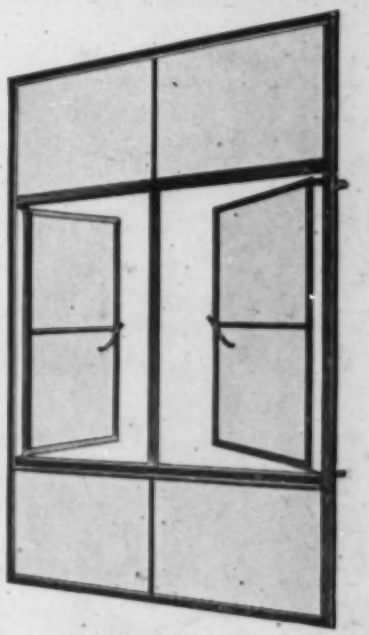
Mesker Steel Windows have additional functional advantages that appeal to tenants, increase rental possibilities. For example, they admit 30% more daylight, are simple to operate. A mere *flick* of the finger opens them . . . allowing 100% draftless ventilation. There's no swelling, sticking, broken sash cords or sliding friction with which to contend. And especially important, Mesker Steel Windows are SAFE...for they're easily cleaned and screened from *inside*. Attachment of screens from the inside eliminates the yearly nuisance and expense of storing, cleaning and painting. All of which is why you, like so many leading American architects, will want to specify Mesker Steel Windows for all your housing projects.

Specify MESKER STEEL WINDOWS FOR YOUR NEW HOUSING PROJECTS



Mesker Windows For Housing Projects

The standard sizes of Mesker Steel Casements (Series 300) can be used singly or in combination to achieve almost any size window opening required to suit any particular detail. For large picture windows, stationary (non ventilator) sizes are available in all widths and heights. Both windows shown are made on special order, and will be available only on large scale housing projects. For smaller projects, the Mesker Series 300 Residence Casement is more suitable.



Mesker

STEEL WINDOWS

MESKER BROTHERS • 428 SOUTH 7th STREET (2) SAINT LOUIS

Aluminum roof solves corrosion problem

ALUMINUM ROOF

An aluminum roof has been installed over the cast house at Reynolds Metals Co. Plant No. 1, Louisville, Ky., as a solution to the corrosion problem caused by the cast house fumes in the building. The 22 gauge galvanized iron roofing material formerly used had to be replaced at intervals of approximately eight months because of the corrosion caused by the fumes. Test panels of aluminum were exposed to the cast house conditions for more than a year before the new roof was installed, and no appreciable effects from corrosion were noticed.

"STRATOVISION"

Plans have been announced by the Westinghouse Electric Corp. for a new system of television and FM radio broadcasting from stratosphere airplanes cruising six miles in the air. Initial flight tests of the system, called *Stratovision,* are expected to be made this fall, and the system will be inaugurated as soon as permits and equipment can be obtained.

According to Westinghouse officials, the new system "would make coast-to-coast television and FM broadcasting possible at a reasonable cost, and would permit these services to be broadcast to even the most isolated farm homes many years ahead of any previously suggested system." It would employ a low-powered ground transmitter to send television and FM broadcasts to a specially-designed high-altitude plane, equipped with receivers and transmitters for rebroadcasting the programs back to earth. A coast-to-coast network for relaying the programs from plane to plane between New York and Hollywood would require stationing only eight such stratosphere planes above strategic areas spanning the continent. Planes would be designed to operate at the 30,000-ft. level for slightly under 11 hours on one fueling. Four planes would be assigned to each broadcast location, two of which would be in the air at all times—one to handle programs, the other to stand by in case of emergency.

Stratovision was originated by C. E. Nobles, Westinghouse engineer, and further developed by the Westinghouse organization in cooperation with The Glenn L. Martin Co., aircraft designers and builders. Application has been filed with the Federal Communications Commission for permission to make flight tests of the system.

Compact airlines ticket counter unit

AIRLINES COUNTER

A standard 4-ft. two-level half-circle counter unit developed by United Air Lines is the nucleus around which United's downtown traffic offices in major coast-to-coast cities are being redesigned to accommodate anticipated air travel increases.

The units are being constructed in batteries of three or more, depending upon traffic volume. Each is a small ticket office in itself, with all working tools within easy reach.

LUMBER "WELDING"

An automatic process which eliminates the normal dimensional limitations of lumber in the prefabrication of almost everything made of wood—from ironing boards to houses—has been announced by Muskegon Machine Co., Inc., Newburgh, N. Y.

The process is the combination of various known principles, applied to automatic mass-prefabrication. With it, panels ranging from ½ to 3 in. thick, from 10 in. to 16 ft. in length, and of practically any width desired can be

(Continued on page 26)

"They certainly guessed right on this 'Duration Housing,' didn't they?"

—Drawn for the RECORD by Alan Dunn

Reconversion STARTS WITH THE STORE FRONT

WITH the lifting of war-time restrictions, the flow of new merchandise is rapidly restoring a buyers' market. Competition is with us again. Your clients can meet it best with a "friendly front"—a new clear-type front that establishes a bond between the store and its customers.

Brasco Construction blends perfectly with both old and the newer building materials—any type of facade. Sweeping glass areas and inviting contours are easily achieved with Brasco's complete family of members, solidly built of heavy-gauged metals, designed and engineered to meet the most advanced ideas in modern store front planning.

Brasco's exclusive designs enhance the beauty of the entire front . . . patented features assure trouble-free construction and safety to glass. Store "reconversion" problems are most easily and permanently solved with Brasco Store Front Construction.

★ A COMPLETE LINE FOR EVERY DESIGN ★

Brasco MODERN STORE FRONTS

BRASCO MANUFACTURING CO.

HARVEY · (Chicago Suburb) · ILLINOIS

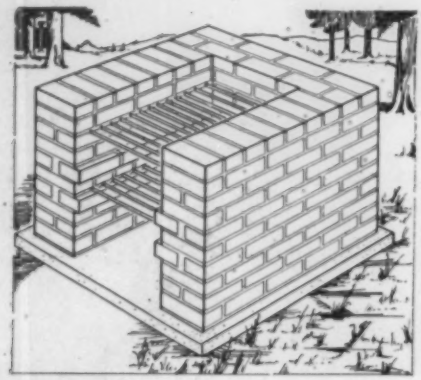
National Distribution Assures Effective Installation

Copr. 1945 by Brasco Manufacturing Co.

 (Continued from page 24)

made "in one piece," automatically, on a single machine.

The machine used is an evolution of the well-known "Linderman," used for over a quarter century to eliminate waste in the lumber industry. Its prime characteristic is that it welds wood together in such a manner that a wider piece made from two narrow pieces is at least as strong as and frequently stronger than would be a single piece of the same width. This is accomplished by use of a double-tapered dovetail joint with one or more dovetails for the pieces, supplemented by an automatic gluing process. It locks the wood sections together so solidly that glue, in many cases, would not be required. The use of glue is to "fuse" the wood together, the glue being forced into the cells of the wood at the joint to form a "welded" bond even stronger than solid wood.



Brick and concrete outdoor barbecue

OUTDOOR BARBECUE

Anticipating the day when steaks again will be plentiful, the Structural Clay Products Institute has prepared plans for an inexpensive outdoor barbecue, suitable for either an individual family or a neighboorhood group.

Requiring no critical materials, the barbecue is made principally of brick, and is constructed on a concrete base. Either charcoal or wood may be used as a fuel. Wood is burned on a steel grate while supports are provided for a removable charcoal grate to be placed 5½ in. below the cooking grill. The grill and wood grate are made of ½-in. round steel bars, imbedded in the mortar. In the interest of economy, the plans do not call for a chimney; the open end must be faced toward the prevailing breeze to insure a good draft.

Copies of the plans may be obtained without charge from the Structural Clay Products Institute, 1756 K St., Washington 6, D. C.

MODULAR SIZES OF FACING TILE

Dimensional coordination in postwar building has taken another step forward with the adoption of new modular sizes of glazed and unglazed facing tile.

The new sizes, according to Harry S. Plummer, director of research of the Structural Clay Products Institute, will measure 3¾ by 5 by 11¾ in. and 3¾ by 3¾ by 11¾ in., which will give nominal sizes of 4 by 5⅓ by 12 in. and 4 by 4 by 12 in. when mortar joints are taken into consideration.

STAIR TREAD

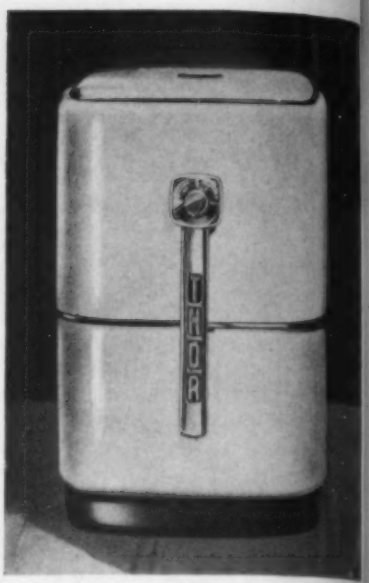
An all steel *Safe Groove Tread and Stair Step* recently developed is said to be suitable for the construction of steel stairs of the open riser, or steel riser type. The tread is bolted or welded to the steel stringers, making it unnecessary on many jobs in specific types of buildings to construct steel sheet pan type stairs with the disadvantage of a dead load of concrete.

The tread is suitable for fire escapes and stairways in power plants, industrial buildings, warehouses, subways, industrial loft buildings, chemical plants and freight houses, and wherever stairs of steel construction of the ordinary types have been regarded as standard.

The safety tread affords a firm, secure foothold. This is primarily due to the grooves, plus the fact that the tread surface is comprised of non-slip, abrasive grip filler. The safety grooves are interlaced with slots which permits ready drainage, thus keeping the treads free of clogged materials, and making them practically self cleaning. Wooster Products, Inc., Wooster, Ohio.

BOLT ASSEMBLY

Another plastic fastening device newly announced is the Des-Bolt, composed of a molded plastic expansion sleeve and any standard nut and bolt assembly of the correct size to match the sleeve. The sleeve is the important element of the design and makes possible the simplicity of the device. It is composed of three thin fingers with an inside taper extending approximately three-fourths of their length from the flanged head. The head is a flange with a cored hole to accommodate the bolt shank, and countersunk to receive standard countersink type of bolts, with three sharp ribs attaching the flange and sleeve. These thin ribs wedge into the work and prevent the sleeve from turning. Victory Mfg. Co., 1105 S. Fairoaks Ave., S. Pasadena, Calif.



Single unit washes clothes or dishes

COMBINATION CLOTHES AND DISHWASHER

A single compact unit, the *The Automagic Washer,* washes both clothes and dishes by means of two completely separate, readily interchangeable sets of tubs and accessories. It will be produced first as a portable unit, later as a sink combination for permanent installation.

The clothes washer—said to spin clothes better-than-wringer dry at 600 r.p.m. without vibration—has a cast aluminum agitator and enameled steel spinner bowl, each operating on a separate vertical drive shaft, one within the other. For dishwashing, the agitator and spinner bowl are replaced by another set of attachments including a spinner bowl and a set of hollow steel fingers or tubes, mounted on the agitator drive shaft, over which are placed wire baskets for silverware, dishes and cups (complete service for six persons). Drain water is pumped out from the base of the machine, either uphill into a sink, or into permanent plumbing drains. Hurley Machine Division of Electric Household Utilities Corp., Chicago, Ill.

AUTOMATIC DISHWASHER

A fully automatic electric dishwasher that fits under the kitchen sink is intended to be "built into" kitchens with all plumbing and drain connections concealed and permanently connected. It will be manufactured both as part of a cabinet sink, with front-opening door, and as a separate unit with its own cabinet for installation under present sink-top work surfaces. The water conditioner replacing soap is automatically injected during one of the washing cycles. The drying is by rapid circulation of air heated by an

(Continued on page 28)

JUST A MINUTE, MADAM...

(it shouldn't happen to you!)

Maybe a lot of merchandise *doesn't* stay on some store shelves long enough to gather a coating of store-dust. Even so, we'll bet our bottom dollar that a lot of stores have lost many sales because they simply couldn't do a *thorough* housekeeping job!

Air-borne dust settles everywhere. Although most annoyingly noticeable on displayed goods, it is also harmful to fixtures, walls and furnishings—causing frequent painting, cleaning and redecorating. It costs a lot of money that *needn't* be spent!

For, there's a *sure* way of getting rid of dust and dirt and other particles floating around in the air—Westinghouse Precipitron.*

This remarkable Westinghouse development *collects* dust and dirt electronically. It operates 5 to 10 times more efficiently than mechanical air filters. Precipitron is the most effective answer science can provide to solve the problem of unclean air.

You can find out more about Precipitron by calling any Westinghouse Office. Or write Westinghouse, P. O. Box 868, Pittsburgh, Pa.

WHAT PRECIPITRON DOES

Ordinary mechanical filters permit varying sizes and kinds of dust and dirt to pass through the circulatory system—but, PRECIPITRON electronically cleans air, even eliminating tobacco smoke particles!

The result of the "Blackness Test," shown at right, indicates clearly what PRECIPITRON can do. Here are actual photographs of the test—where 2500 cubic feet of air, in each instance, was drawn through a cloth area for a 60-minute period!

The effectiveness of PRECIPITRON, demonstrated here, will save thousands of dollars resulting each year from damage by air-borne dust and dirt in the home, store and factory.

Westinghouse PRECIPITRON

PLANTS IN 25 CITIES... OFFICES EVERYWHERE

THE COSTLY NUISANCE OF DUST BANISHED BY PRECIPITRON, FROM...

Homes, Hotels and Apartment Buildings

Laboratories and Hospitals

Retail Stores, Banks and Office Buildings

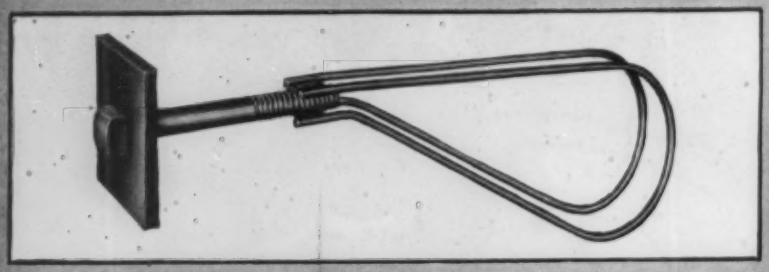
Theatres, Restaurants and Night Clubs

Mills, Factories and Machine Shops

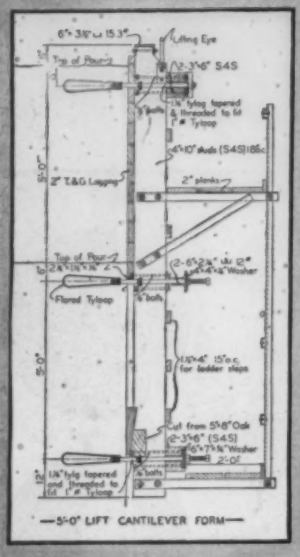
*Trademark registered in U. S. A.

J-04512

RICHMOND TYLOOP
FORM ANCHORAGE FOR MASS CONCRETE STRUCTURES



1¼" x 24" Offset Flared Tyloop Assembly as utilized for heavy Cantilever Lift Forms for Dams. Safe load Capacity 30,000 lbs.



RICHMOND TYLOOPS are—

- High strength, light weight form anchorage devices with a range of sizes from 5,000 lbs. to 30,000 lbs. safe load rating.
- Adaptable for all conditions of form anchorage to concrete.
- Easily assembled by workmen as all of the threaded members have coarse, fast acting, self-locking threads.

  Forms strip easily leaving a clean wall surface when Richmond Tyloops are used. The bolts (Tylags) do not bind.

RICHMOND OFFERS—without obligation, consultation on problems involving form anchorage, estimates on job requirements and recommendations on specific form problems.

RICHMOND WORKING PARTS—reusable accessories for Tyscrus including Tylags, Tycones and Flat Washers are furnished . . .

RETURNABLE FOR FULL CREDIT
—no rentals charged.

Form-Ty Engineering Guide and Form Details for Concrete Dams Available on Request

SEE OUR CATALOG IN SWEET'S

RICHMOND SCREW ANCHOR COMPANY, INC.
816 LIBERTY AVENUE · BROOKLYN, NEW YORK
MANUFACTURING SINCE 1911

FOR BETTER BUILDING

(Continued from page 26)

electric unit and forced by a blower. The machine holds approximately 6[illegible] dishes plus silverware, or the service for 12 meals; pots and pans can be washed when the dish and glassware holding racks are removed. Edison General Electric Appliance Co., Inc., 5600 W. Taylor St., Chicago 44, Ill.

RECONVERSION ROUNDUP

Reconversion plans announced since V-J Day indicate a gradual filling of civilian needs. For example:

Refrigerators

Household refrigerators are again in production, but will not be immediately available to the general public as they will be released to military establishments, hospitals, etc., subject to WPB regulations.

Three models, all of 7 cu. ft. food storage capacity, are on the production schedule of Frigidaire Division, General Motors Corp., authorized by WPB to construct 50,000 household refrigerators during the third quarter of 1945. All three models will be equipped with drawer type meat tenders, sliding cold storage trays, sliding glass top hydrators, and the "Meter-Miser" sealed rotary type compressor which is permanently sealed and requires no oiling. Other features will be aluminum "Quickube" ice trays and a cold control for regulating freezing speeds and cabinet temperatures.

One 7 cu. ft. medium-priced model is already in production at the General Electric Co. plant, the first of the 95,000 household refrigerators to be produced by G.E. in 1945. Suitable for the average family of four or five persons, this machine has 12.6 sq. ft. of shelf area and makes 8 lb., or 80 cubes, of ice. It is powered by a permanently oiled, hermetically sealed refrigerating mechanism. Two other G.E models will be in production soon —a 6 cu. ft. unit and a 7 cu. ft. de luxe model. All three are the same as those made just before the war.

Water Heaters

The end of August saw the first production of electric water heaters at Edison General Electric (Hotpoint) Appliance Co.'s Chicago plant since early in 1942, but the first output is being built for emergency U. S. Navy housing in the Hawaiian Islands.

Civilian production for immediate shipment to dealers will follow the Naval order, with early 1946 output rate expected to surpass any prewar year. Civilian units will resemble pre-

(Continued on page 138)

IT IS widely believed that plastics will be used on a much greater scale in postwar building, but as to just when, where and how, ideas are often vague.

Formica knows. For 22 years this plastic decorative surfacing material has been made for architectural uses, and applied to hundreds of fine stores, shops, restaurants, public buildings, hotels, train, bus and air terminals by leading architects.

Formica engineers worked out the technique of application. This experience has made possible a wealth of detailed, exact information on just how to use the material, what thickness, grade and type. It is yours for the asking.

Bring your files up to date with detailed material on which you can base your specifications.

FORMICA

THE FORMICA INSULATION COMPANY

4651 SPRING GROVE AVENUE • CINCINNATI 32, OHIO

MANUFACTURERS' LITERATURE

ABRASION TESTER

Taber Abraser. Detailed information on a method of testing the wearability of materials and surfaces. 16 pp., illus. Taber Instrument Corp., North Tonawanda, N. Y.

ALUMINUM CASTINGS

Permold Aluminum Castings (Bulletin 45 PMC). Reference Data bulletin on permanent-mold-castings. Points out advantages claimed for aluminum castings; offers suggestions for designing; includes four tables giving the nominal composition and physical properties of Permold aluminum base alloys and Permold aluminum base sand cast alloys. 20 pp., illus. The Permold Co., Medina, Ohio.

CLAY PIPE

Standard Vitrified Clay Pipe and Fittings. Specific dimensional and specification reference data applicable to the full line of clay pipe and fittings in accordance with the recently adopted A.S.T.M. standards. Tabulated engineering information on all items in the standard and extra strength classifications. The Clay Sewer Pipe Assn., A.I.A. Bldg., Columbus 15, Ohio.

COLOR

(1) Color Dynamics in Industry; (2) Color Dynamics for Hospitals and Institutions; (3) Color Dynamics and the School; (4) Color Dynamics for Offices, Hotels, Clubs and Restaurants; (5) Color Dynamics for the Home. A series of booklets detailing the application of color dynamics principles to various types of buildings. 24 pp. each, illus. Color Engineering Dept., Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh 22, Pa.

Optonic Color System. A color selection guide giving 18 rules for the selection of colors to compensate for deficiencies in natural and artificial light and to obtain maximum benefits from color on the basis of measured contrasts and reflection value. The Arco Co., Cleveland, Ohio.

ELECTRODES

Airco Electrodes. Covers the entire line of Airco Electrodes for welding and hardfacing. Includes electrode selector chart and index, mechanical properties and testing, complete descriptions, details of applications, etc. 56 pp., illus. Air Reduction, 60 E. 42nd St., New York 17, N. Y.

FANS

"Tubeaxial and Vaneaxial Models" (Bulletin No. 1601). Announcement of the new Vaneaxial Blower, with full description, tables of air deliveries, and diagrams. Also full description of tubeaxial blowers with tables of ratings. 12 pp., illus. Hartzell Propeller Fan Co., Piqua, Ohio.

GRANITE

Granite Products and ***Fletcher Nine Square Standard Granite Sections.*** Two new pamphlets, the first of which lists the company's products and gives a brief description of each. The second is a bulletin offering "a specific proposal for the application of accepted concepts of modular design and dimensional control to granite." Gives schedule of sizes and information on finishes, together with table of specifications. 4 pp.; 8 pp., illus. H. E. Fletcher Co., West Chelmsford, Mass.*

KITCHENS

Today's Kitchens. A planning booklet offering various arrangements of standard kitchen units. Floor plans, color combinations, unit measurement tables included. 16 pp., illus. The Kitchen Maid Corp., Andrews, Ind. 9 cents each.

Min-A-Kit Book. Kitchen planning in miniature. A collection of 46 models of kitchen equipment, to be cut out and used for kitchen design. Also contains general kitchen planning information and descriptions of individual units. Youngstown Kitchens, Mullins Mfg. Corp., Warren, Ohio. 10 cents.*

LOUDSPEAKER

The Duplex Speaker. Full details on a two-way multi-cellular loudspeaker. Specifications and performance curves. 12 pp., illus. Altec Lansing Corp., 1210 Taft Bldg., Hollywood 28, Calif.

MACHINERY CATALOG

Directory of Products and Engineering Literature. A comprehensive directory of products and engineering literature describing the company's lines of equipment. More than 1600 product types are listed. 32 pp., illus. Allis-Chalmers Mfg. Co. 565, Milwaukee 1, Wis.*

METAL TRIMS

Chromedge. Announcement of aluminum trims in color, with the color bonded into the metal. 4 pp., illus. The B & T Metals Co., Columbus 16, Ohio.*

POWER MEASUREMENT

Dillon Dynamometer Manual. The story of the traction type dynamometer and the increasing number of uses which are being found for it in testing and weighing procedures in industry. 20 pp., illus. W. C. Dillon & Co., Inc., 5410 W. Harrison St., Chicago 44, Ill.

PRINTER-DEVELOPER

Just the Ticket. Descriptive folder on the Bruning Model 41 Printer-Developer for making BW black and white prints. Specifications included. 4 pp., illus. Charles Bruning Co., Inc., 4754 Montrose Ave., Chicago 41, Ill.

ROOF DECKING

Ribbed Roof Decking. Catalog of products, with specifications, load tables and construction details. 20 pp., illus. Macomber, Inc., Canton, Ohio.*

RUST PROOFING

Electro Rust Proofing System of Cathodic Protection. Non-technical description of the Cathodic method of protection of underwater surfaces against rusting. 4 pp., illus. Electro Rust-Proofing Corp., Dayton 10, Ohio.

RECONVERSION

How to Take a Reconversion Inventory (1) of Your Electric Motors, (2) of Your V-Belt Drives, (3) of Your Centrifugal Pumps. Bulletins giving practical suggestions for reconversion check-ups. Allis-Chalmers Mfg. Co., Advertising Dept., Milwaukee 1, Wis.*

When You Reconvert . . . Install Modern Lubrication. A summary of the advantages claimed for the centralized lubricating system. 4 pp., illus. The Farval Corp., 3248 E. 80th St., Cleveland 4, Ohio.

SILICA

Ethyl Silicate (Form 5989). Discussion of the hydrolysis of ethyl silicate and its use as a source of silica. Typical formulas for the one-step and two-step methods of preparing silica depositing solutions. Applications of ethyl silicate, including its use in the formulation of heat-resistant paint, in cellulose nitrate and vinyl resin lacquer formulations to improve adhesion to glass, and as a preservative and weatherproofing agent for stone, brick, concrete and plaster. 12 pp. Carbide and Carbon Chemicals Corp., 30 E. 42nd St., New York 17, N. Y.*

SCREW THREADS

Aero-Thread Screw Thread System (Bulletin No. 242) Description of the system, design and installation data, dimensions and specifications, ad-

(Continued on page 136)

*Other product information in Sweet's File, 1945

Search and Research

◆ The constant search for better building materials and equipment, for better planning, for better architectural design is accelerated by the pent-up demand for building, now released by the peace. That search is based on research. The difference between search and research can probably be summed up in the difference between the haphazard and the scientific or analytical. It is strange, perhaps, but true, that the best creative work is based on the study of what has been known and done before—on research. It is the evolutionary way. It is the way that atomic bombs or attic stairs are developed. It is the architectural way.

◆ But research threatens to swamp the individual architect with innumerable new products and new techniques. Manufacturers are conducting and planning research activities on an unprecedented scale. General Motors is creating a model research community, Johns-Manville has just announced its new research building, to mention but two of hundreds. Many corporations are enlisting the aid of college and university laboratories and technicians, as is shown by a recent survey conducted by Tulane University. The much-debated Kilgore-Wagner bill is evidence of the interest in the possibilities of more comprehensive, better integrated, research programs. The perennial proposals of chapters of the A.I.A. for some central professionally controlled "Research Bureau" indicates the architect's awareness of his problem of acquiring more complete and authoritative knowledge of the products presented for his use—knowledge of performance tests (both field and laboratory), of installation and maintenance factors, as well as sizes, kinds, and costs.

◆ The architect's research problems thus increase as the numerous results of manufacturers' research become available in products for building. His field of choice is widened, his responsibility to the owner for making the wisest choice increases. The time he must spend in research to make such choices increases in proportion. To aid the architect, wise manufacturers are carrying their research beyond that necessary for their production, into *use* through comprehensive field reports and tests. They will thus keep the architect and engineer more fully informed, by presenting the factual results, not only of laboratory tests, but from experience in the actual use of the product in building, knowledge the architect prefers to acquire vicariously rather than by experience which might prove better.

◆ Through the trend toward formation of architectural firms consisting of teams of experts in various fields, the firms' research task of analyzing the research available is lightened by assignment to many minds. But in tackling the design of any project, the study of all available data is still a requisite to improved design and facilities.

◆ Before the component parts of the building industry make decisions regarding any legislation proposed to center the direction, control, execution, coordination, distribution, or reporting of research in the hands of government, they should conduct their own research into present means to such ends. An analysis of their own needs regarding research, the existing means for meeting those needs, the ways of improving those means, may well indicate a program within the industry as a desirable alternative.

Kenneth K. Stowell

EDITOR

ARCHITECTURE IN ARGENTINA

As illustrated by the work of Jorge Kalnay, Architect

Interest in South American development and expansion is not limited to either the political or economic aspects, although the efforts of United States Ambassador Spruille Braden in Argentina are being watched with growing interest on the part of the news-conscious public. Professional interest has also been awakened, in some measure due to the part architect Harrison has played in furthering the good neighbor policies in South America.

Architecturally, Argentina has passed through the cycle of the design phases from early colonists through the Latin American and European influences and is coming of age in an architecture that not only bespeaks the trend towards modern simplicity, but which also arises from climatic conditions and the demands of the people being served.

The demand for outdoor living spaces, even in city apartments and residences, has developed an architectural pattern in which terraces, balconies, and gardens play an important part, in many instances providing perhaps the most distinctive feature of the architecture.

Like many other South American countries, the techniques of reinforced concrete construction have been developed to a far more refined stage than in most sections of the United States. Whether this will change when steel becomes more available in South America, remains to be seen. However, many examples may prove a positive inspiration to American designers in those sections of the country where climate either permits or encourages further development of outdoor facilities for year-round use.

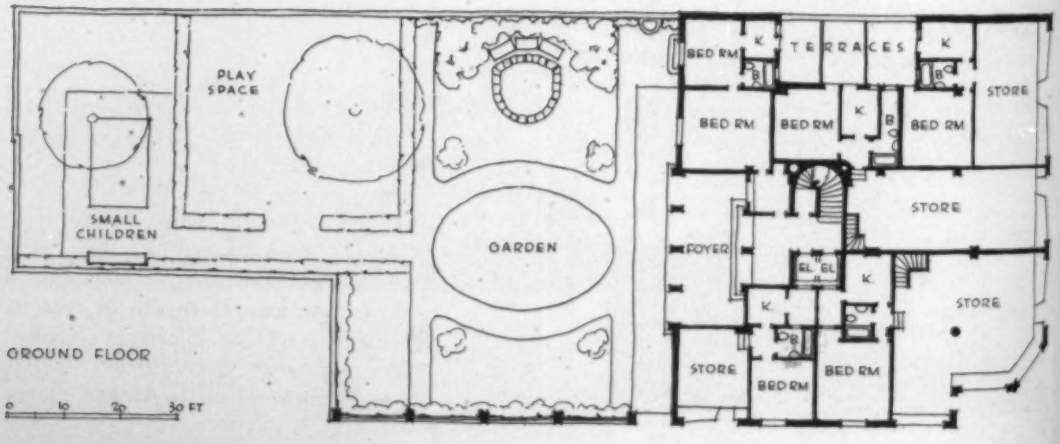
MANSION "GARAY"

An Apartment House in Buenos Aires, Argentina

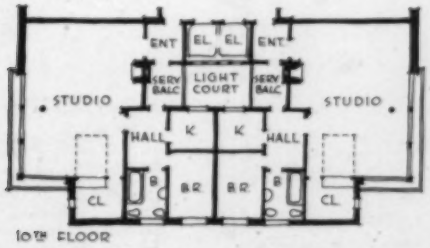
Valuable frontage on one street was naturally most useful for stores, and the architect's solution therefore provided the entrance to the apartment house from a garden on the side street. The garden provided not only light, air, and sunshine, but a pleasing vista from the apartment terraces and windows, a play space for children, and a formal garden, which can be seen in the illustrations in these pages. One interesting feature is the provision of living quarters in connection with the stores, a practice hardly universal in the United States.

Below: interior of a studio on the tenth floor, which is equipped with a bed which folds into the closet. The daytime appearance of the studio is shown on page opposite

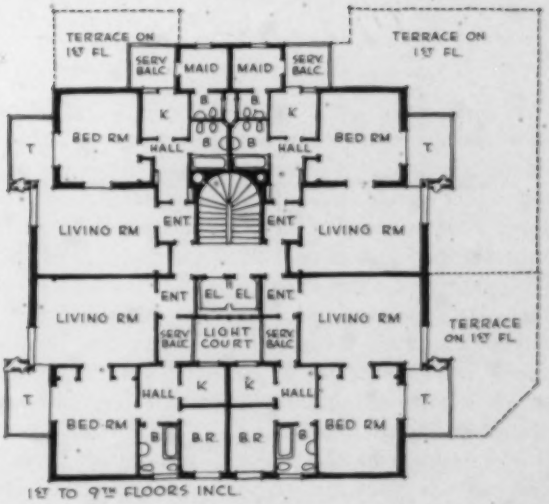
The first floor plan is especially interesting in having the main entrance foyer, at the "rear" of the apartment house, thus making available more rentable store area on the important street



The plan directly below shows the studio with its closet-bed. Also a light court which would hardly be considered adequate in American practice, nor would our building laws deem one stair sufficient for a building of this character and size

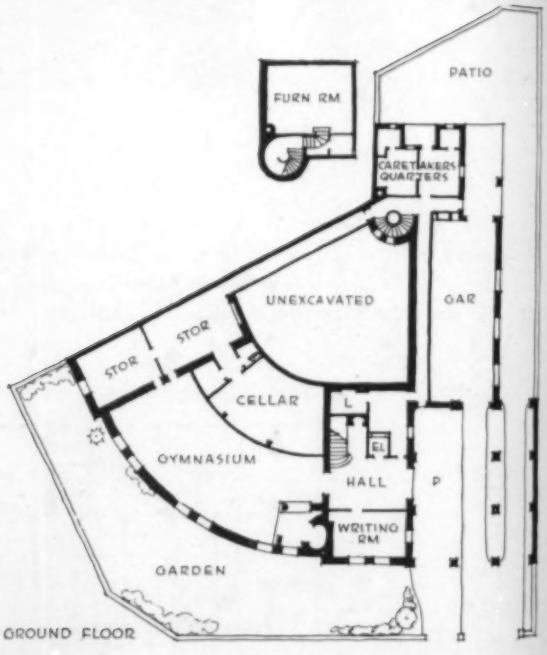


10TH FLOOR



1ST TO 9TH FLOORS INCL.

THE RESIDENCE OF SR. CARLOS MENDES



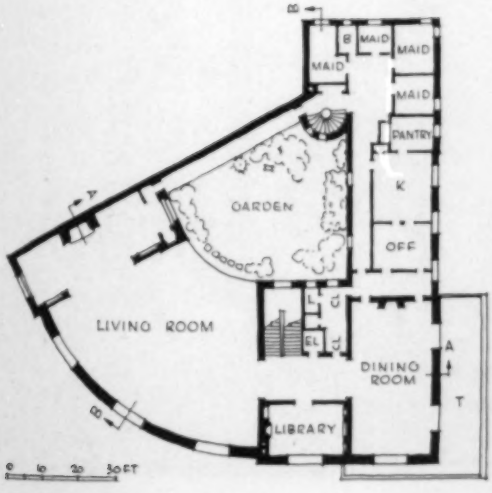
AN unusual project planned for an unusual plot can, in the hands of an imaginative designer, produce a most interesting design. The unusual problem presented to Jorge Kalnay was that of designing a residential establishment for a bachelor who entertains lavishly and who desired to show his remarkable collection of maps, furniture, glass and pictures in a proper setting. The architect accepted the challenge of providing "a modern frame for a collection of antiques and works of art" which is especially interesting because it fulfills so successfully its dual functions.

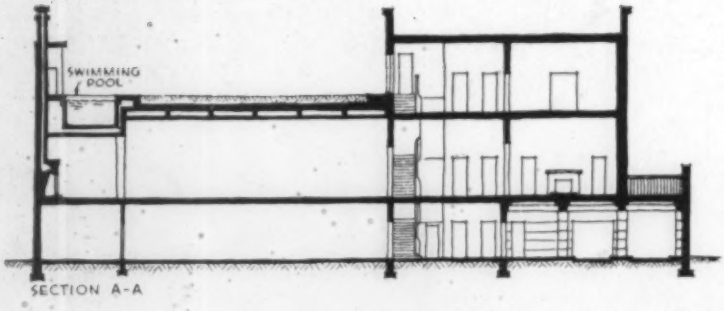
The plans show the unusual character of the lot and the way in which the architect has placed the various

GONCALVES

Buenos Aires, Argentina • *Jorge Kalnay, Architect*

The glass wall of the large curved living room slides back to provide wide access to the garden, a feature of great convenience and pleasure. Closed, it provides a flood of light and a beautiful view of the garden





SECTION A-A

Above: a view of the living room looking toward the fireplace alcove (which offers opportunity for intimate conversational grouping of furniture). Below: the large dining room is a necessary component of lavish entertaining

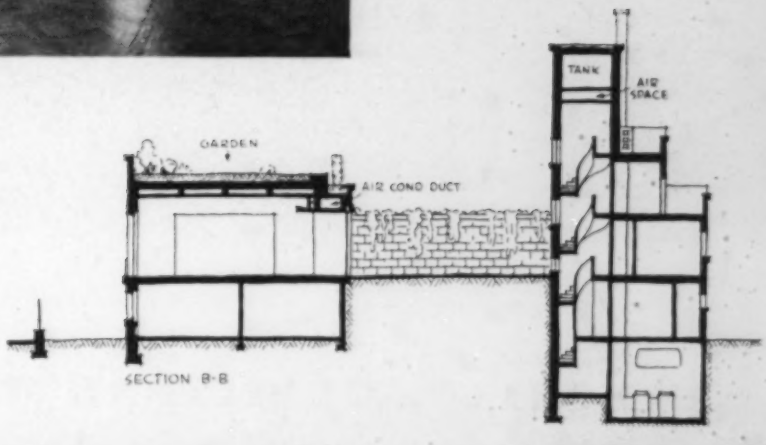
functional elements of the house on different levels. One of the most striking features is the garden at an upper level, which forms an outdoor living room as an adjunct to the enclosed living room. Again, there is a third garden, a roof garden, if you will, with a pool, on the roof over the living room. Undaunted by the limitations of the lot, the architect has thus provided three areas of green.

The exterior, of buff limestone, is simple, dignified, and reposed, unornamented except for its functional black iron rail which is equally restrained in its design.

The interiors are as rich in their furnishings and appointments as they are simple and unadorned in their architectural design. There is a notable absence of moldings or other ornamentation. The floors are rich yellow marble terrazzo, oversized aggregate being *giallo antico*.

The bedroom is furnished with Brazilian Colonial furniture, very dark rosewood, and hangings of red damask. The owner's dressing room, with its fireplace, is seen beyond

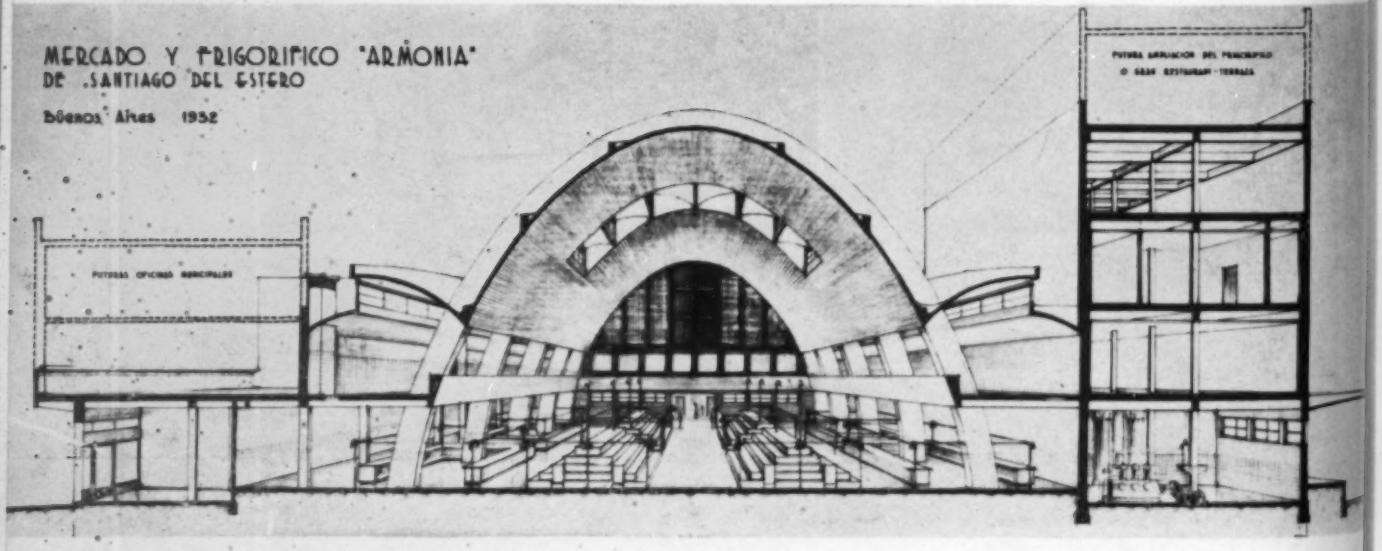
The gymnasium below is furnished as an informal lounge, with red tile floor. This corner of the room is provided with a typical country open fireplace for informal gatherings



"ARMONIA", MUNICIPAL MARKET AND COLD STORAGE WAREHOUSE

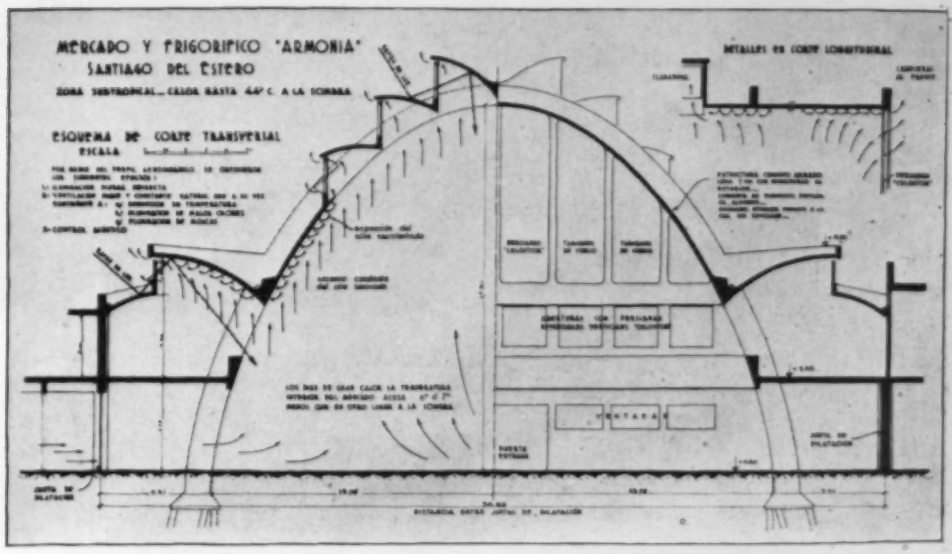
for the Province of Santiago del Estero, Argentina

Jorge Kalnay, Architect



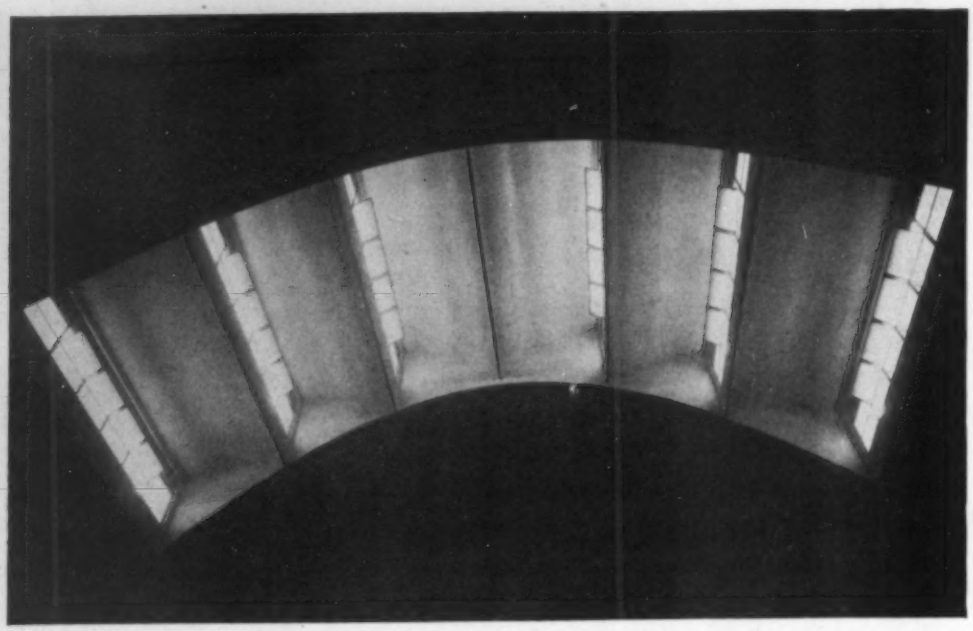
THIS remarkable design for a market in a sub-tropical zone is the result of much careful thought concerning the engineering of both lighting and ventilation. The method of ventilation shown in the section lowers the temperature of the market by some ten to fifteen degrees, without the use of mechanical devices. Arrows show the airflow.

The design is clean-cut and functional from both the engineering and architectural point of view. It has been skillfully executed in reinforced concrete. The large supporting ribs are exposed on the exterior, so that the interior ceiling is left unified and smooth, except for the interesting lines and planes of the combined ventilating and lighting sections. Stalls for the merchandising of food produce are arranged over the main floor and

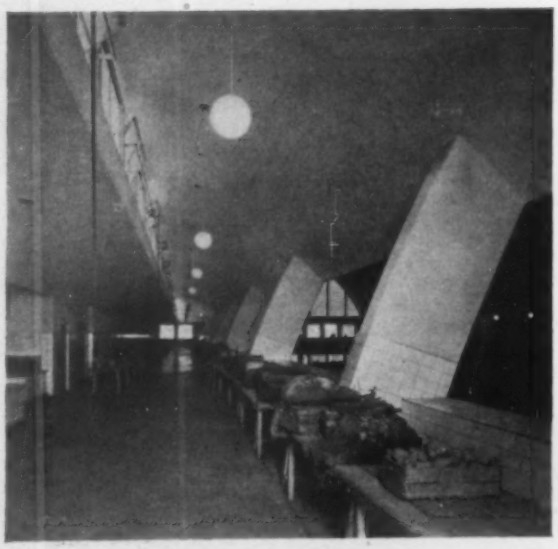


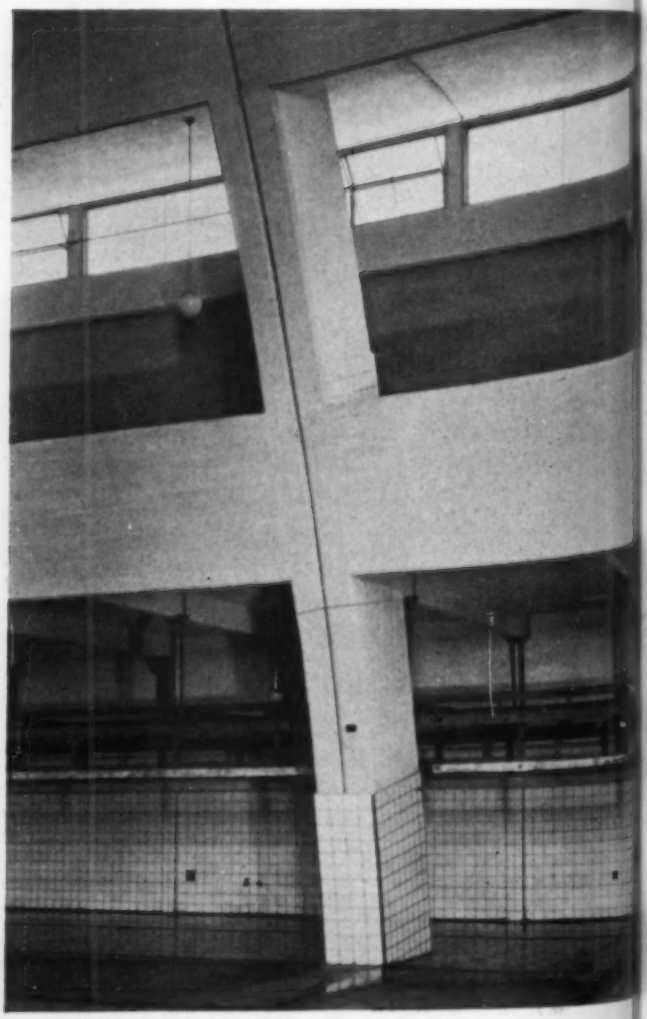
along the second floor aisles at either side. The tile finish has been designed to insure the utmost cleanliness and sanitation.

Dotted lines on the drawing opposite show the locations of future municipal offices. The natural lighting, as can be seen in the diagram, is largely by a dual reflection, and artificial flood lighting is possible from inconspicuous standards.



Above: looking up at one of the ventilating and lighting portions of the ceiling of the market hall. Below, left: the upper gallery is devoted to the produce of smaller merchants. Below, right: a detail showing the expansion joint at one of the main structural ribs; also tile wainscot and overhead racks of butcher stalls

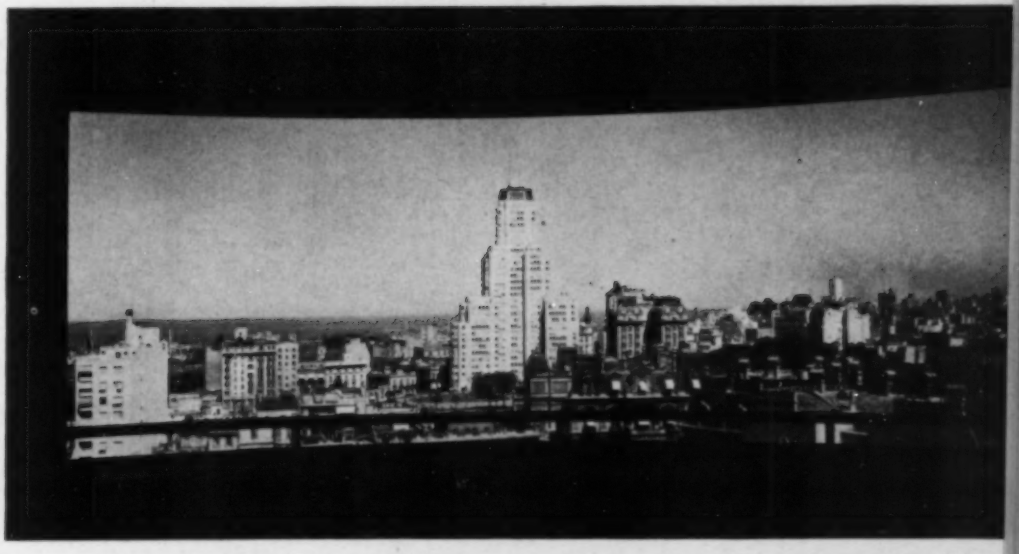




APARTMENT HOUSE, "ARROYO"

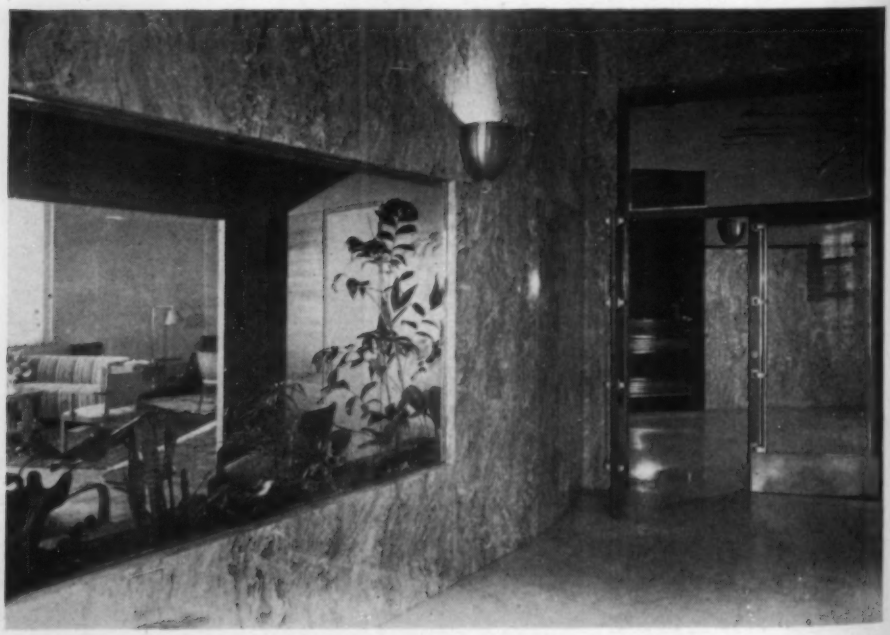
Buenos Aires, Argentina

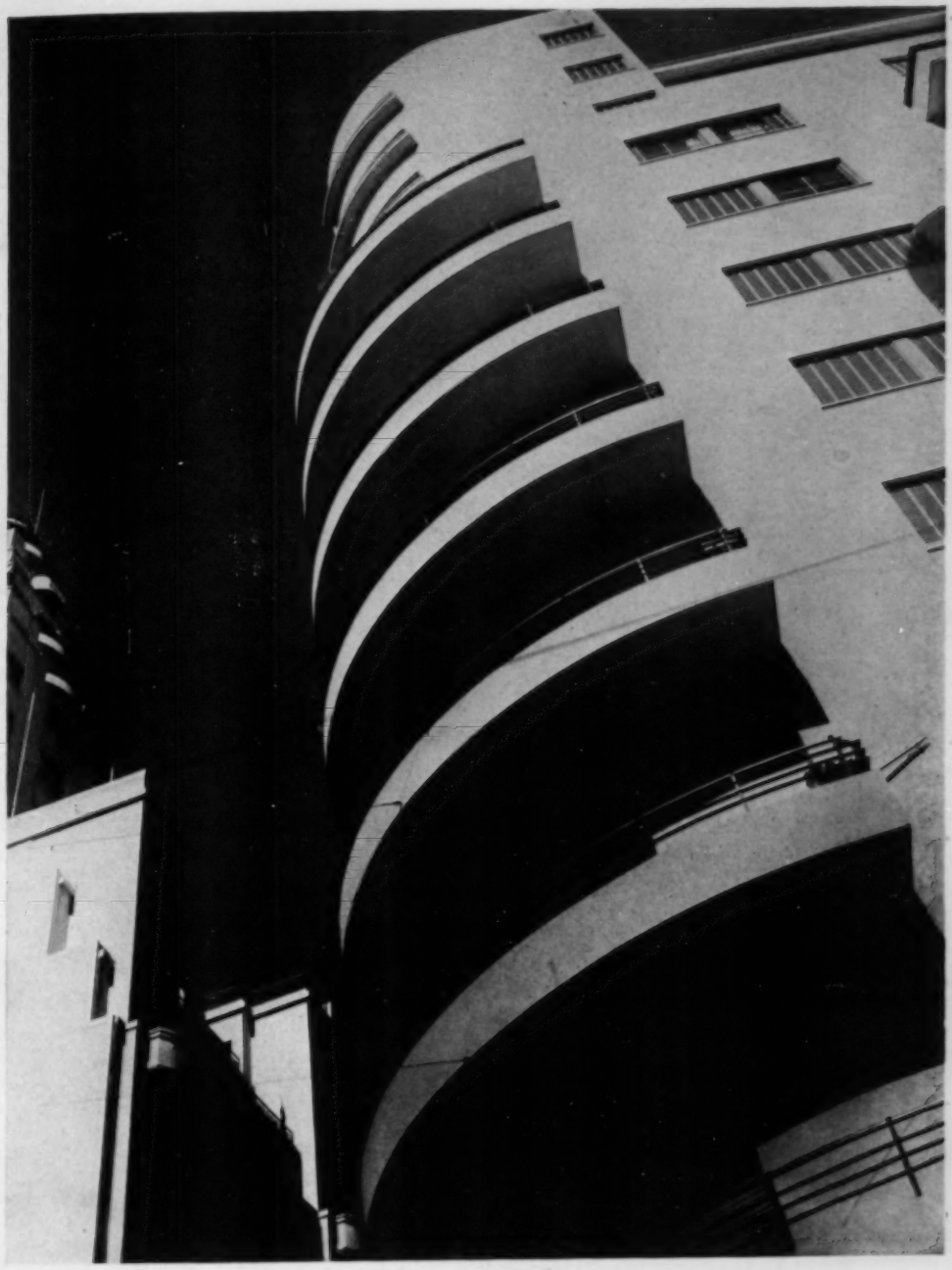
Jorge Kalnay, Architect

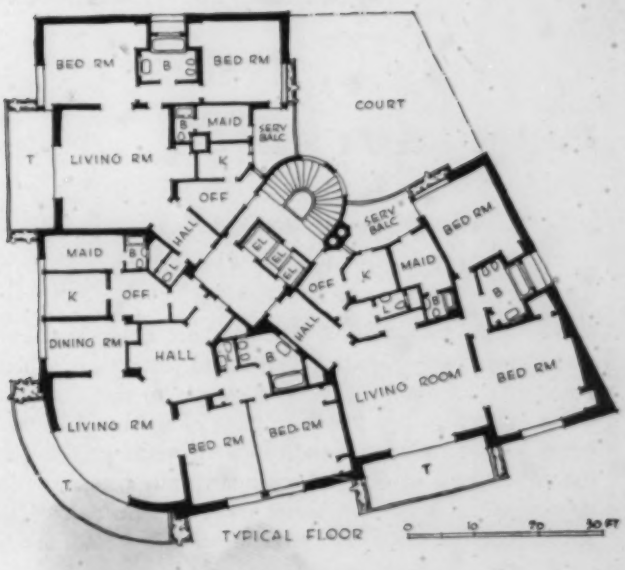


Views of the entrance hall and stairway, "Arroyo" Apartment House. The exterior view shows the curved stair tower with the adjacent service balconies opening onto the rear court. The curved stair of reinforced concrete has a solid stringer, worthwhile from architectural, maintenance, and safety points of view

Apartment houses in the Argentine usually have spacious, attractive waiting rooms on the ground floor where visitors can be received, in hospitable contrast to the usual halls in American apartment houses







CURVED balconies of reinforced concrete extend practically the entire width of the curved side of each living room. The balconies themselves form the distinctive architectural feature of the facade, and give character to the building through the play of light and shade and the contrast of light iron with the plain light surface of the building. Major rooms in the apartments are spacious and pleasant, perhaps at the expense of cut-up service portions and numerous rooms without natural light or ventilation.

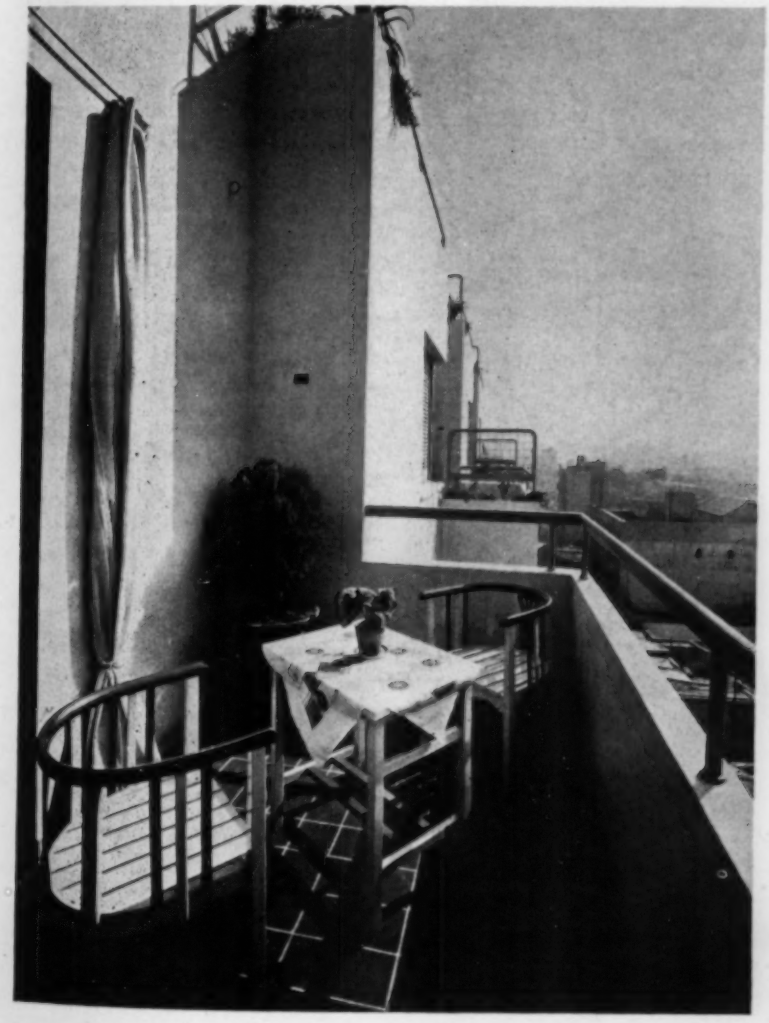
PERU HOUSE

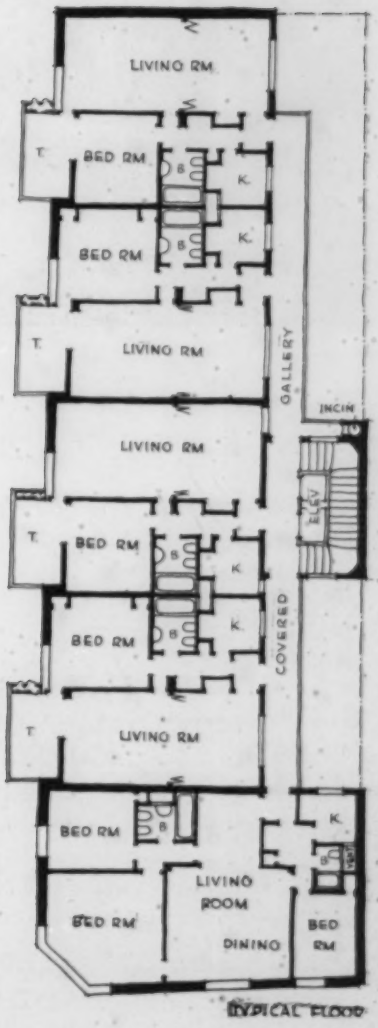
Buenos Aires, Argentina

Jorge Kalnay, Architect

THE simple projection of balconies not only provides a pleasant adjunct to the apartments, but forms the architectural pattern in light and shade. These are small apartments for moderate rentals. Access to the apartments is by elevator or stair, and a covered gallery takes the place of the usual enclosed hall of American apartments. An incinerator is incorporated in the stair tower as an added convenience for the disposal of waste. Each apartment, except the largest, has its own private terrace, available to both living room and bedroom. The structural frame is reinforced concrete. Walls are common brick, stuccoed, and painted light buff.

Above: interior of one of the long living rooms, looking toward the terrace or balcony. The dining area can be shut off on occasion by the use of folding doors, as shown on the plan. Below: one of the attractive terrace balconies, with its view over the city



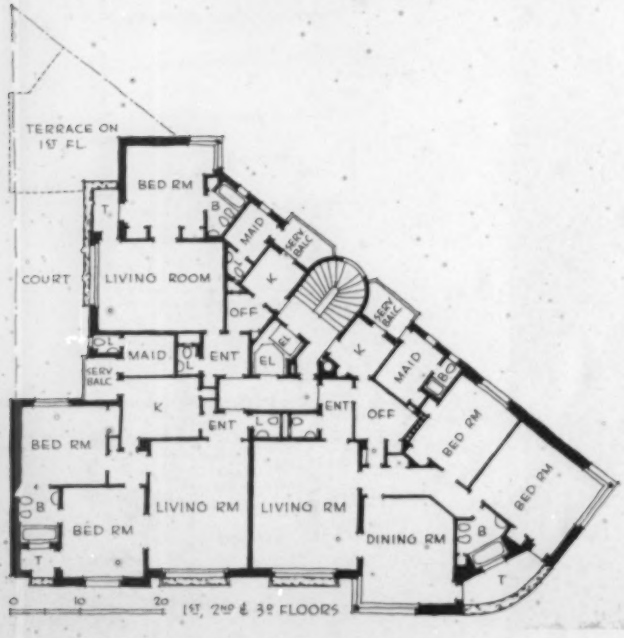


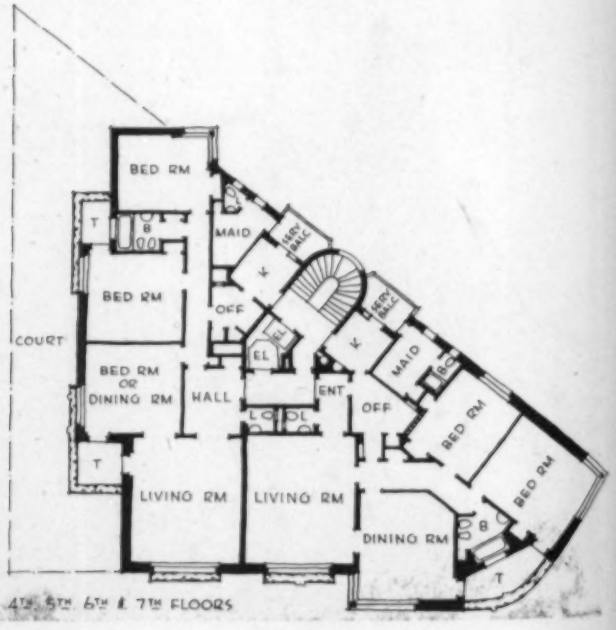
APARTMENT HOUSE "BARRANCAS"

Buenos Aires, Argentina

Jorge Kalnay, Architect

INTERESTING designs are achieved by the simplest means, by the proportioning of solid to void, and the interesting play of shade and shadow in balconies and protective copings. Plans are made with the greatest emphasis on the main rooms, while other portions may seem to American planners to be unusually cut up. The freer building codes of Argentina permit many features which would not be possible under most American laws.





CHURCH HEATING SYSTEMS

By Bruce C. Wenner and J. T. H. Anderson

In providing the exceptional flexibility that a church heating system demands, the architect will find his specifications becoming surprisingly complicated. The authors give their own specification practices for conventional heating equipment, developed in many years of church design with Wenner & Fink, Architects.

In 1917, during the last World War, several of us arose at an early hour on Christmas morning to attend Mass in a little French Catholic Church, about two miles from the camp. It was very cold and there was snow on the ground. The only thing that we recall about the services of this church was the fact that there was no heat. This omission was not due to the lack of fuel but to the lack of heating equipment. The church, being several hundred years old, was built without much idea of providing comfort for the worshipper, but while we were supposedly attending church for spiritual reasons, the physical conditions made themselves so manifest that any spiritual inspirations were entirely forgotten.

The builders of this ancient church would be amazed at the standards of our times. To see architects of today specifying zone systems and automatic controls and ventilating and cooling equipment, would probably leave them not only confused but aghast. But it is true that today a heating system that leaves the choir fanning themselves in an overheated chancel while the congregation in the rear pews shivers in drafts is simply not up to modern standards.

It would not be too much to say that the heating plant of today's church should get more, rather than less, attention than that of another building of similar size. The relatively little use that some areas get means that rapid heating up is an especial requirement. Since other areas have entirely different uses, and since times of use differ widely, the system must have unusual flexibility. For another thing, the church commonly does not command any great skill in operating the plant. It is not unusual for the minister to operate the heating plant himself; even if there is a janitor or sexton he is not paid too well. At any rate, automatic controls are a virtual necessity, and, of course, automatic firing of some kind. Ventilation requirements are of considerable importance in a church, and they vary by areas just as heating needs do. Also churches seem peculiarly susceptible to trouble from drafts. All in all, the church heating plant is not a simple installation.

The two economy considerations—economy of installation and economy of operation—must be studied with the foregoing in mind. We recall one minister who had a tin thermometer donated to him which he prized very highly. He insisted on placing it alongside the thermostat, and when the thermometer reached 70 he turned off the thermostat. The congregation shivered, and he complained that the plant was not adequate; the architect and engineer were confronted with a real puzzle before they finally traced down the culprit. The minister, being a minister, not an engineer, did not realize that in a heating-up period the air temperature gets to 70 before the walls, ceilings and furniture are warmed up. Even an automatic system may have that kind of operational trouble; the operative engineering may actually have a negative quality.

In general, however, the automatic controls make for operating economy in the peculiar problems of a church. When each area is zoned on an individual line and controlled with an automatic or manually operated valve, and when the boiler is subject to automatic firing by an oil-burner or stoker, economy of operation is obtained both as to fuel consumption and as to the amount of effort required by the caretaker.

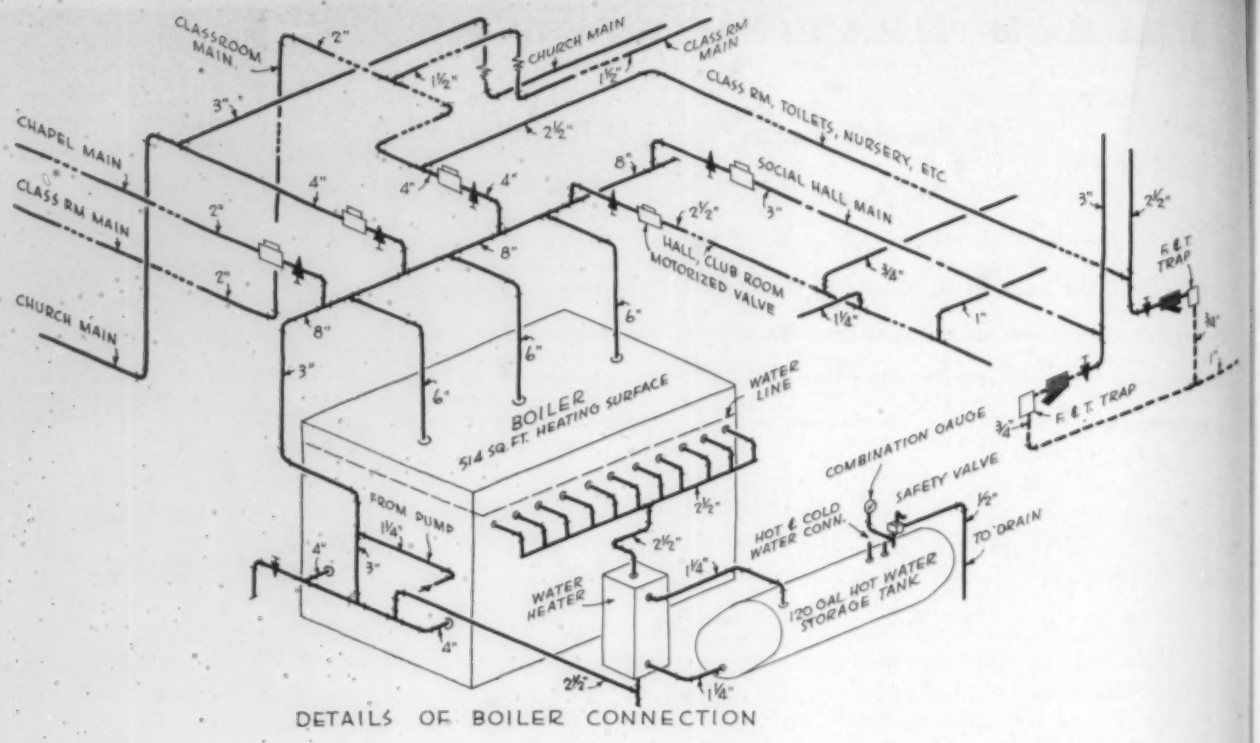
The following notes will give general suggestions of the usual practice of this firm in determining the heating facilities for different sized church plants:

THE SMALL CHURCH INSTALLATION

For a church containing small sized nave, departmental and class rooms and fellowship hall, we suggest a steam or warm air system.

The steam system: The nave of the church should be equipped with convector radiators located under the windows, with the grilles fitted in the window sills. The convectors should be sufficient to maintain the temperature at 55°. Schoolroom recirculating units of the high-velocity type should be installed to raise the temperature to the desired 72° and maintain it. These units should be equipped with a three-speed motor and switch. The high speed is to raise the temperature quickly and the medium and low speeds to maintain it. The high speed can also be used for summer circulation.

While the chancel structure is compact, with the choirs it is occupied by a large group of people, and the air is dormant. By installing a unit for recirculating the air in the space below the chancel, fitting it with a discharge duct properly located in the walls of the chancel and inlet grilles located at chancel floor line, this space can be made comfortable. This system gives the chancel and nave ap-



DETAILS OF BOILER CONNECTION

proximately four changes of air per hour, counteracting the tendency of hot pockets forming and over-heating.

The fellowship hall may be fitted with a recirculating air unit and radiators. Outside air intake may also be fitted to this unit. Often the fellowship hall is located below ground, and the outdoor inlet can be opened when the hall is in use by installation of a manually controlled damper. All the above units are to be manually controlled, with start and stop switches located in convenient place.

With oil or stoker system installed in the boiler, a room thermostat may be located in the nave and another in the fellowship hall. Either thermostat may be wired with relay so as to operate the burner or stoker.

The piping may be either a one-pipe system with returns from the units, or a two-pipe system.

To get the boiler size, take the radiation and unit load, add 20 per cent for pick-up, and add the proper amount for piping installed.

The warm air duct system: For the small church this system may be installed, with individual runs for nave and fellowship hall. The ducts should be fitted with shut-off dampers forming a system of recirculating ducts. The main ducts can be installed under the fellowship hall floor. All outlets to the nave and chancel should be installed in window sills with the inlet grilles at the floor line.

MEDIUM SIZED CHURCH AND COMMUNITY HALL

The heating installation for the medium sized church should be arranged as a zoned system. Entrance halls, pastor's study, church parlor and toilets ought to be on a line arranged for 24-hour operation. The fellowship hall and kitchen might be on the No. 2 zone line. Church chancel and church entrances would comprise the No. 3 zone line, classrooms the No. 4 zone. The chapel would be on No. 5 zone together with the boys' hobby room, which is usually located near the boiler room and heated by a line leading directly from the boiler.

School-room ventilating units of the high-velocity type, with outside air connections, fitted with three-speed motors and switches, should be used in the chapel, nave and chancel. An auditorium-type unit should be used for the fellowship hall, with a ceiling recirculating type unit for the boys' hobby room.

As each zone is individually piped, it will have a thermostatically controlled automatic valve. The valves should have delayed operation of at least one minute duration in opening. All radiators should be of the convector type and located under windows with the grilles in the window sills in nave, chapel, etc.

The rooms on Zone 1 might be in use at any hour of the day and night. The temperature therefore should remain at the prescribed degree.

The fellowship hall area on Zone 2 would be heated to 55° by radiation. Auditorium-type units would bring the heat up to the desired temperature. They should have a complete system of recirculating duct work. Also install an outside air connection fitted with dampers. The heating element of the unit should be of sufficient capacity to handle at least 25 per cent outside air at zero temperature and the remaining 75 per cent of recirculated air at 60°. Its fan motor should have at least two speeds, with appropriate switch.

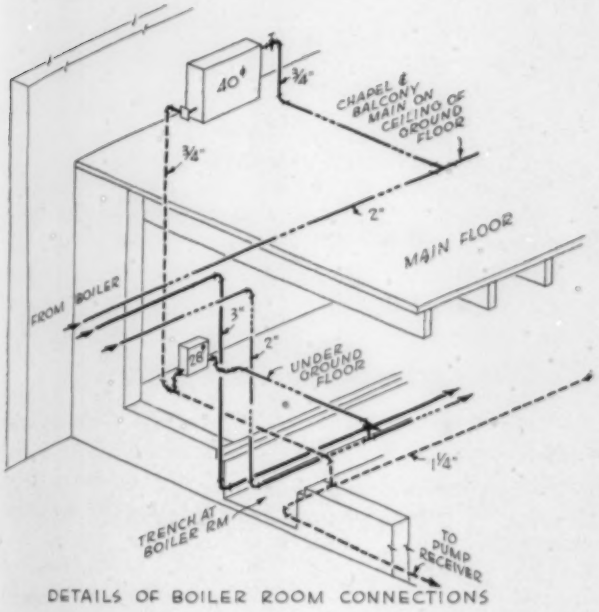
The church should be fitted with convector radiators sufficient to heat to 55°, with unit ventilators of the high-velocity type.

These units and ventilators also should have outside air connections with damper control. The heating element of the unit should be of sufficient size to handle 25 per cent of outdoor air with the remainder being recirculated. The chancel would have a separate unit and duct work for recirculation. All units should be specified to be silent in operation and of sufficient size to handle four changes of air per hour. The motor control (start and stop) switches for the nave units are best installed in one focal point; the three-speed motors on the units would have

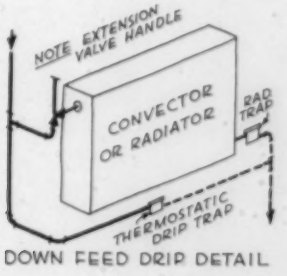
their own appropriate switches installed in the units. The chancel unit's start-and-stop switch should be located in a convenient point near the organ console. An exhaust fan for summer use can be installed to ventilate attic space over nave and chancel. The fan should have grilled openings, in ceiling of nave and chancel.

The chapel, being used for gatherings which are too small for the church nave, has a lower ceiling than the nave, smaller windows and a larger seating capacity per unit of volume. This room should have an air ventilator and an outside air connection fitted with dampers. This unit would be located on the ceiling of the floor below and equipped with a system of recirculating ducts. Convector radiators would be installed to maintain the dormant 55° temperature.

The boy's hobby room can be fitted with a ceiling type recirculating unit and piped direct from boiler. This unit should have a two-speed switch, and shall be in operation whenever room is occupied. The piping for this unit



DETAILS OF BOILER ROOM CONNECTIONS



DOWN FEED DRIP DETAIL

should be installed under the floor in a pipe trench, with all pipe runs concealed. All pipes should be installed for quick expansion and properly trapped through the correct size heavy duty drip traps. In case the return mains are long, additional main air eliminators should be installed at the high point of each return. This will eliminate all possibility of air and water hammer.

In case a boiler condensate pump is installed, the size of this pump and receiver should be adequate to handle the entire quantity of condensate at the peak load and return this condensate against at least ten pounds pressure over the boiler's safety and valve setting.

The valves installed on radiators should be fitted with a noiseless type metering orifice, properly sized to allow each radiator to heat evenly, so that one department will not overheat and fill up another department's radiators, and piping installed in the finished departments should be painted in a color that blends with the surroundings.

Each zone automatic valve should be controlled by a room thermostat, to be located in an area that will give the average temperature.

The entire system as installed should be free from all motor, air and combustion noises, etc. Water and steam hammer will be eliminated and the water of condensation will return to the boiler.

The burner or stoker installed ought to be fully automatic, with the pressure stat maintaining the proper head pressure on the automatic valves. The burner would be selected to maintain this pressure with a low stack temperature. The boiler must be installed so that the combustion chamber will have the correct area for proper combustion in order to keep the burner from unnecessary smoking and to maintain stack temperature.

THE LARGE COMMUNITY CHURCH

Fellowship or social halls are often used and should be well ventilated and cooled for summer use.

The nave and chancel may have a cooling system with a reasonably small temperature drop. The operation of the nave unit, however, is a large factor; it should be running at least 24 hours before the building is occupied.

The chapel should have its own individual cooling system. The pastor's offices and ladies' parlors should be on a separate system. All the cooling systems should have fresh air intakes and the system should be fully automatic.

A system of sheet metal duct work including a plenum chamber with outdoor connection and recirculation ducts should be installed. The cooling units should be fitted with a heating element in addition to humidifier and cooling coils.

The cooling system ought to be fully automatic, complete with its own thermostats, individual expansion valve, etc., and properly fitted with drains. The steam heating element should be fitted with an automatic shut-off valve controlled by a room thermostat, and the compressor should be of sufficient size, with condenser.

The heating system might be of the same plan as the medium community church. Or, in place of the zone system, a temperature control system might be used with pneumatic or electric control to each radiator from a thermostat located in each room. The heating elements and dampers should be controlled automatically.

The board for the switches controlling the thermostats, dampers, etc., should be located at a focal point from which each area can be put in operation as desired.

This type of installation should have at least two boilers, each of sufficient size to carry approximately 75 per cent of the total load.

EXHAUST SYSTEMS

The kitchen and toilets should be on a separate exhaust fan. The social hall should have its own exhaust air system. The nave and chancel would be ventilated into the attic space, through an attic exhaust fan. Some states, such as Massachusetts, require positive exhaust systems for church buildings.

For notes on radiant heating see ARCHITECTURAL RECORD, *p. 62, August, 1943; and p. 66, February, 1944.*

Monsen-Chicago Typography Plant, Chicago, Ill.

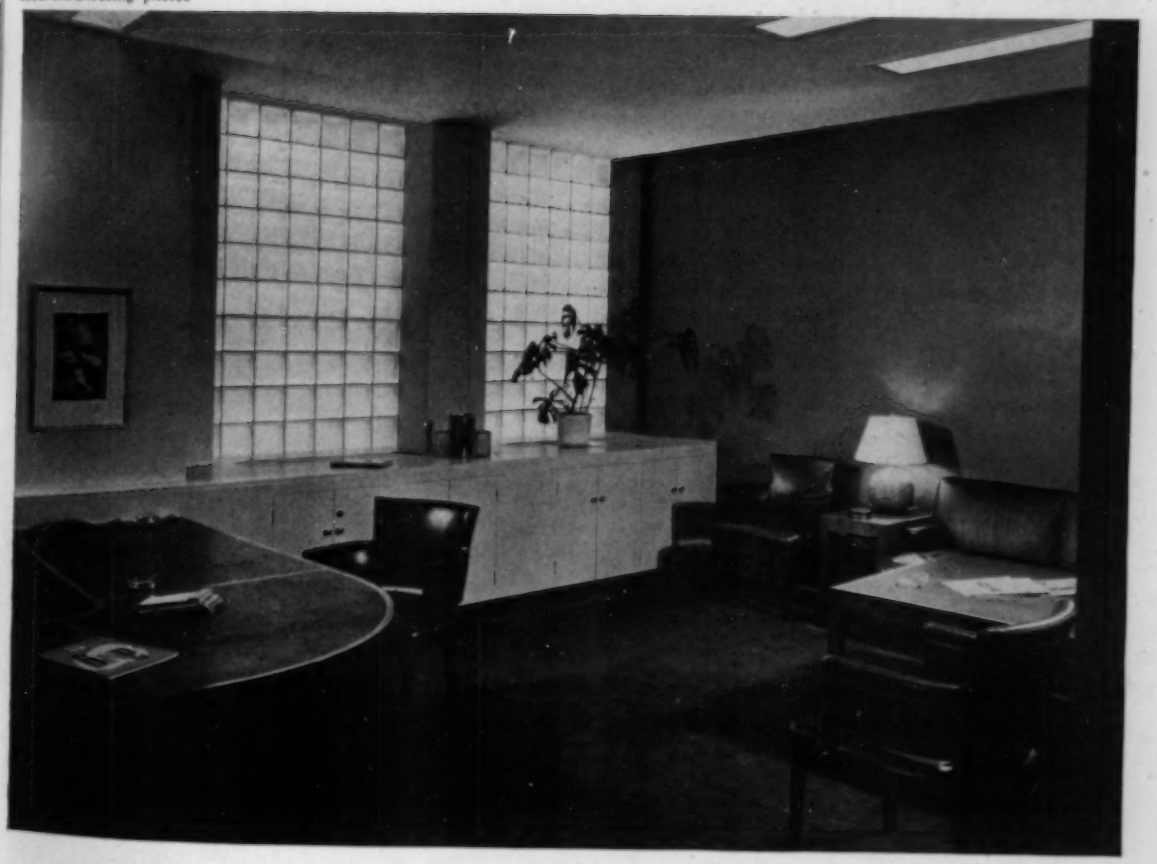
James F. Eppenstein, Architect

REMODELED GARAGE

PROVING that even a hurried wartime remodeling project can just as well have its photogenic aspects, the photographs here show entrance and offices of an old garage after conversion into a typography establishment. The firm needed suitable quarters in a hurry for an essential war assignment—they are typographers for many of the publications of the Army Air Forces, Army Map Service, and the Navy. Though in bad condition, the old garage did provide good space (100 by 100 ft. on first and second floors) for the purpose. Much of the first floor was required for offices; the second floor, having skylights, was more suitable to the manufacturing uses. Daylight for the office section is admitted through glass block in the former window openings; the block being helpful in shutting out street noise. Recessed fluorescent fixtures supplement the daylight.

Display board and built-in cabinets work in well with the completely functional note, and are especially fitting in a typography office suite. Furniture was a part of the architect's assignment.

Hedrich-Blessing photos



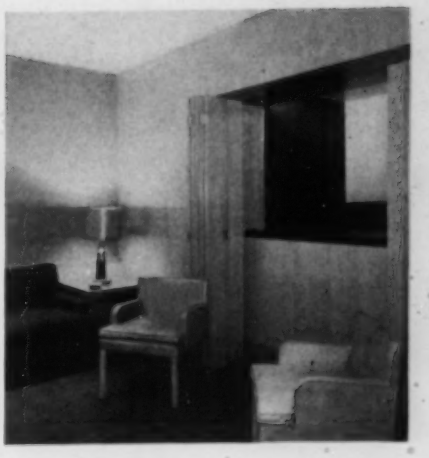
A DISPLAY OFFICE FOR OVERALL

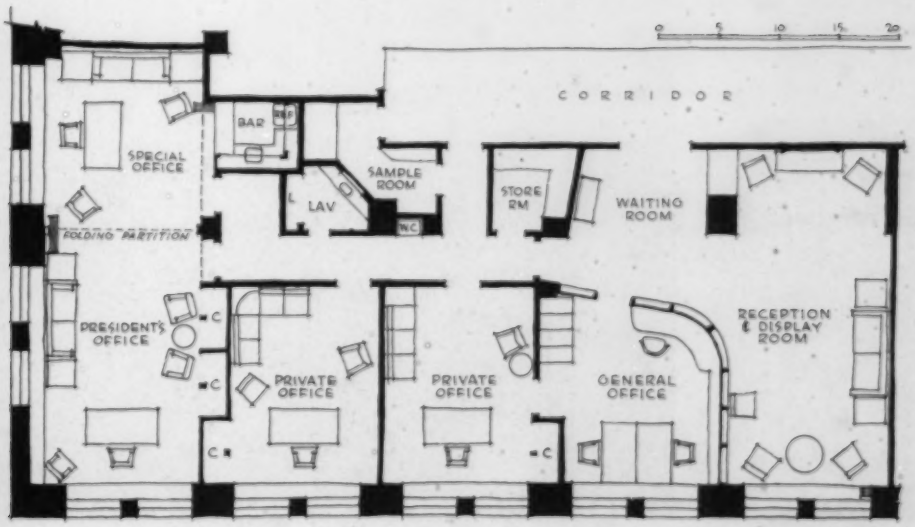
Display Room and Offices for Blue Bell, Inc., New York City

Intramural, Inc., Designers; Daniel Schwartzman, Consulting Architect

Florian de Nardo photos.

WHAT started out a little tentatively to be a New York sales office for a North Carolina manufacturer of work clothes (as shown in the plan) so gratified the clients that they immediately leased the rest of the floor and expanded the project. The salesmanship of the "reception-display" room is done with considerable restraint in the modern manner, being limited to a large-size sculptured figure of a man in overalls and to a photomural of wash drawings used in the firm's advertising, with its slogan superimposed in raised letters. The mural is cove lighted from above. The sofa and stuffed chairs are covered in blue denim stitched in orange, as in overalls. Carpets and fabrics used in all the offices are rough-textured and solid colored—one in forest green, one in chocolate brown, another in slate blue.





DISPLAY ROOM FOR LINGERIE

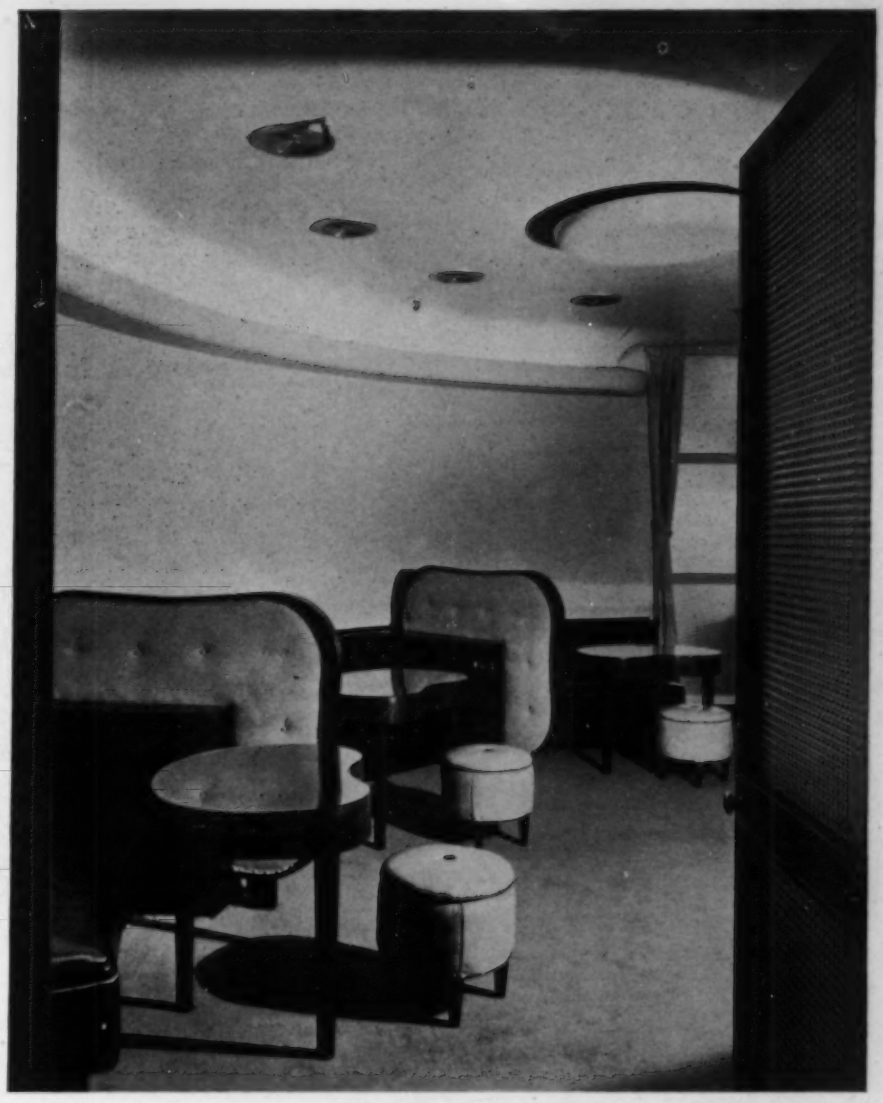
Sales Offices for Chevette, Inc., New York City

Several
seated o
the disp
given so
other by
settee sec

Lea Epstein and

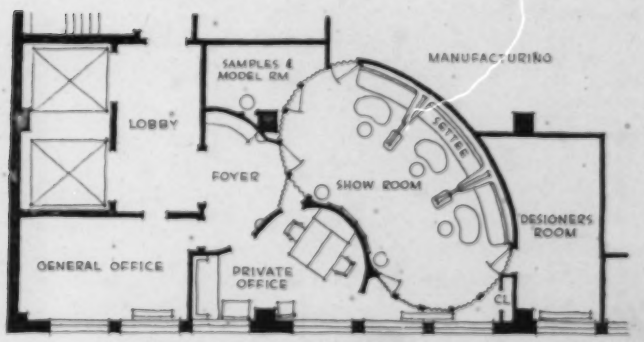
Hans Weiss, Designers

Gottscho-Schleisner photos



Several buyers, witn satesmen seated on the hassocks, can view the displays at a time, but are given some screening from each other by the "dividers" between settee sections

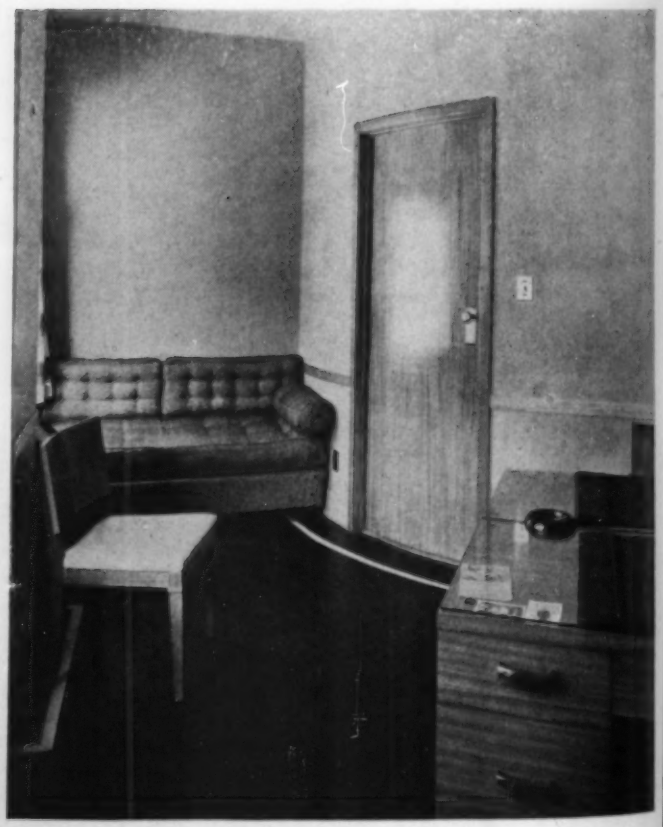
SHORT of the stage or the night spots, there are few places where design gets bolder or more striking than in the sales rooms of New York's Garment Center. Here indeed is a miniature stage where the models pose before buyers to display the charms of the hosiery, gowns or lingerie so earnestly manufactured in the hidden regions of the establishment. Here the arc of mirrors is framed in black alligator imitation leather upholstered panels. The walls and the carpet are of French gray. The dividers between the



A small sales office off the display room provides a place for confronting the buyer with the dotted line

settee sections are of pink leatherette as are also the hassocks. The seats repeat the black alligator of the mirror panels. General lighting is from incandescent lamps in a cove around the outside wall, with spotlights recessed in the ceiling focused on the models.

The offices are done in gray-green painted walls, dark green linoleum floors, bleached mahogany woodwork.



RESTAURANTS

Architectural Record's Building Types Study Number 106

***Prepared in collaboration with* Restaurant Management**

WHAT RESTAURANT OWNERS THINK ABOUT

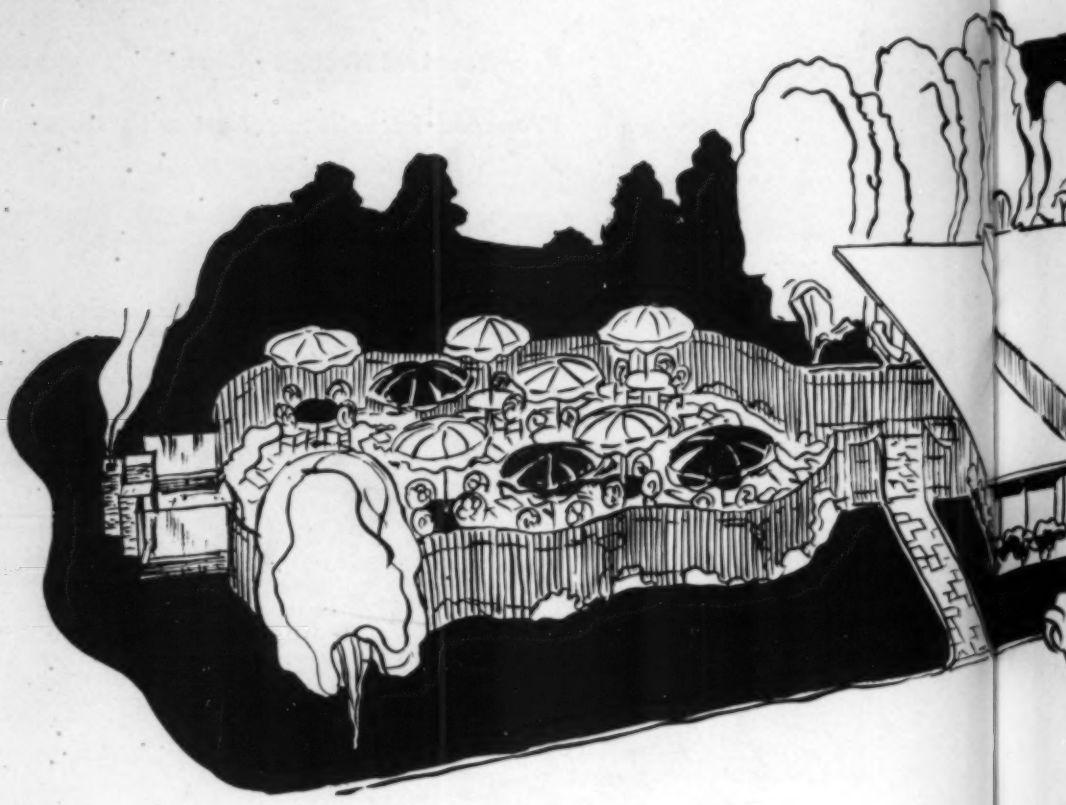
***By James S. Warren, Editor,* Restaurant Management**

CATERING to the public taste, both literally and figuratively, is the business of the restaurant owner. He is chiefly concerned, in his own thinking, with providing his customers with well-prepared, efficiently served meals in sufficient quantity to yield a maximum profit. He is vitally concerned with every phase of his business and he handles most of the details himself, from menu planning to purchasing raw materials, even cooking them, and supervising the daily routine throughout his entire establishment, as well as keeping a careful eye on the cash register. In most cases he owns his own business and is proud of the fact.

For these reasons he is realistic and tight fisted. He must see clearly a profit return on every investment he makes, whether in produce, personnel, equipment, or plan and design. He is usually much less interested, for example, in the esthetics of the decorative scheme than in a plan layout which will save his waitresses a few steps or serve more customers comfortably. He is keenly interested in every sales-stimulating, money-saving aspect of his business. For the most part he is thoroughly representative of the "small businessman" so much in the public eye and economic mind, and there are some 150,000 of him. Right now his pockets are bulging with money just earned which he is itching to spend—providing he can be convinced that its spending will be an investment that will pay a proportionate yield.

For these reasons also he prefers to deal with an architect who understands the operation of the restaurant business, one who can talk with him in his own language, an architect who understands the problems of food delivery, food storage, preparation and cooking, who understands the integration and proportioning of the various services and areas, such as storerooms, kitchens, and dining rooms.

The architect, therefore, who can see the restaurateur's problem as a whole and in detail, and can offer suggestions on every phase of the business, as well as on the design and color of the dining room, will be best able to render profitable service in this field. The architect who can talk intelligently in terms of kitchen layout and equipment with the restaurant owner is likely to be most convincing and best able to influence him in constructive design ideas for both interior and exterior. So the function of the architect, to be successful in this field, is to cater to the purposes, pride, and prejudice of the restaurant owner by contributing materially to the efficiency, economy, and profit of the entire project.



HIGHWAY RESTAURANT for a 100-octane world

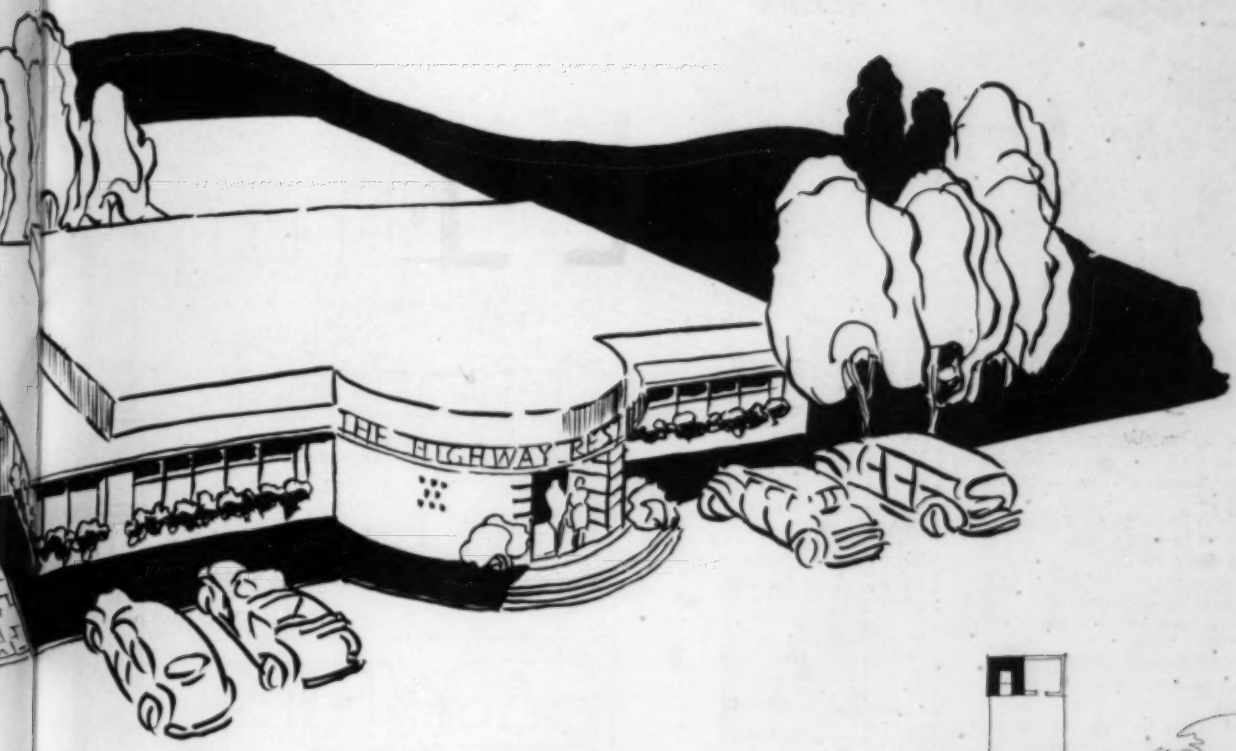
Francis R. Keally, Architect

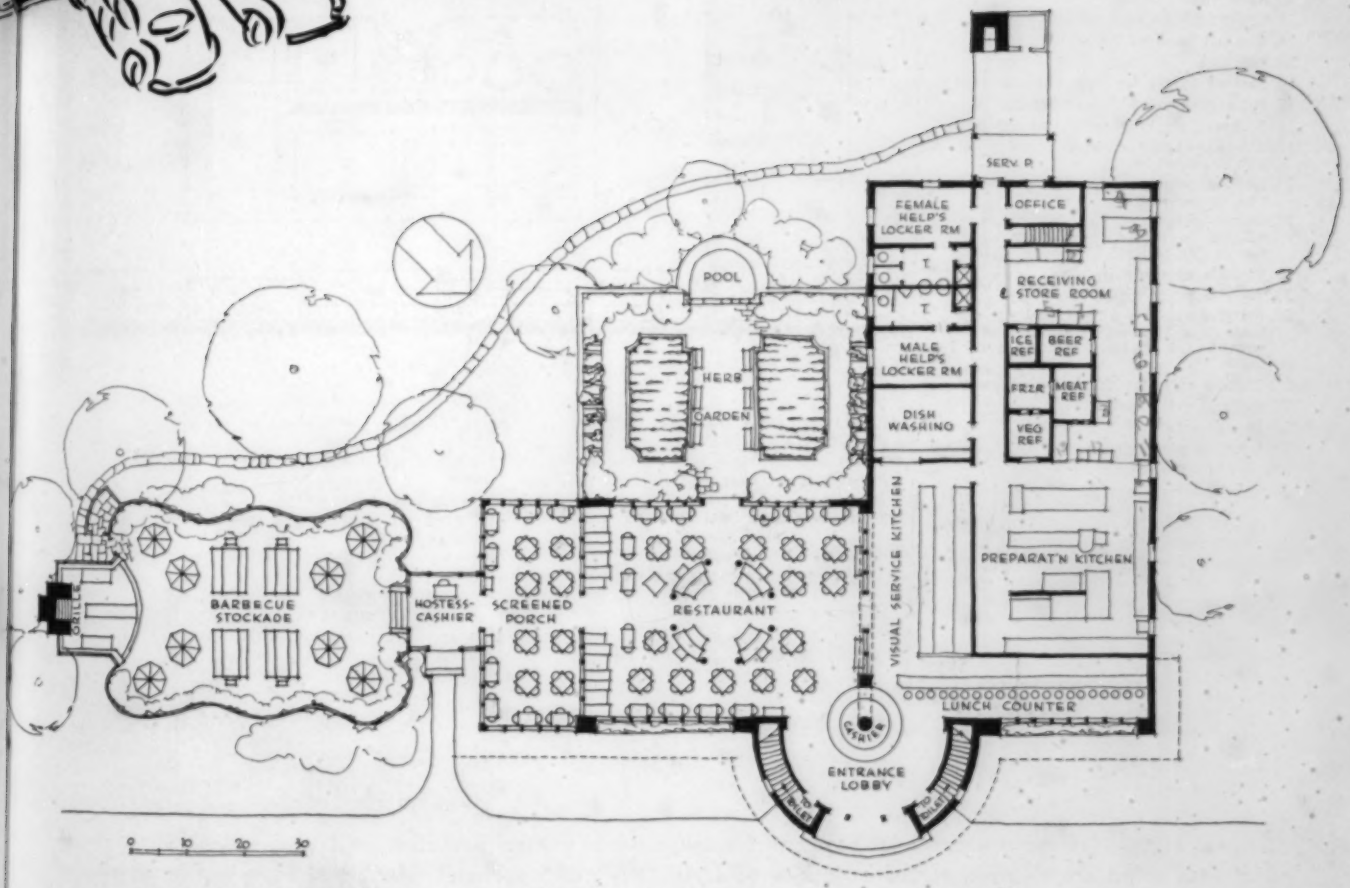
ALTHOUGH this highway restaurant for the newly motorized world was designed especially for this Building Types Study, Mr. Keally is prepared to resent any suggestion that there is anything visionary about it. It is in fact, he points out, not unlike one he is doing right now for a client.

It exhibits, nevertheless, the imagination of an architect applied to a practical problem. Two features are especially noteworthy—the herb garden with dining tables around its perimeter, and the barbecue stockade. The barbecue pit is already a recognized feature of many highway eating places, especially in the West. But so often it is just a big grill standing by itself in a paper-littered side yard, its appetizing appeal further diluted by dust. Here it becomes a feature of an outdoor dining "stockade" visible alike from the highway and from the dining porch and main restaurant. The herb garden contributes further outdoor dining space, also visual interest from the principal dining room, not to mention the material for appealing sauces.

The visual service kitchen, to be done with a Dutch kitchen effect, is still another eye-catcher. But it has its distinctly practical side, for it keeps the waitresses in constant view of their customers, assuring the latter that the girls are not idly chatting in the kitchen.

If winters are cold the establishment automatically withdraws into its shell with the closing of outdoor areas and screened porch. Then perhaps the principal business would be done in the lunch counter, which is placed off by itself for the steady and profitable service of truck drivers and others who ride the roads the year 'round.

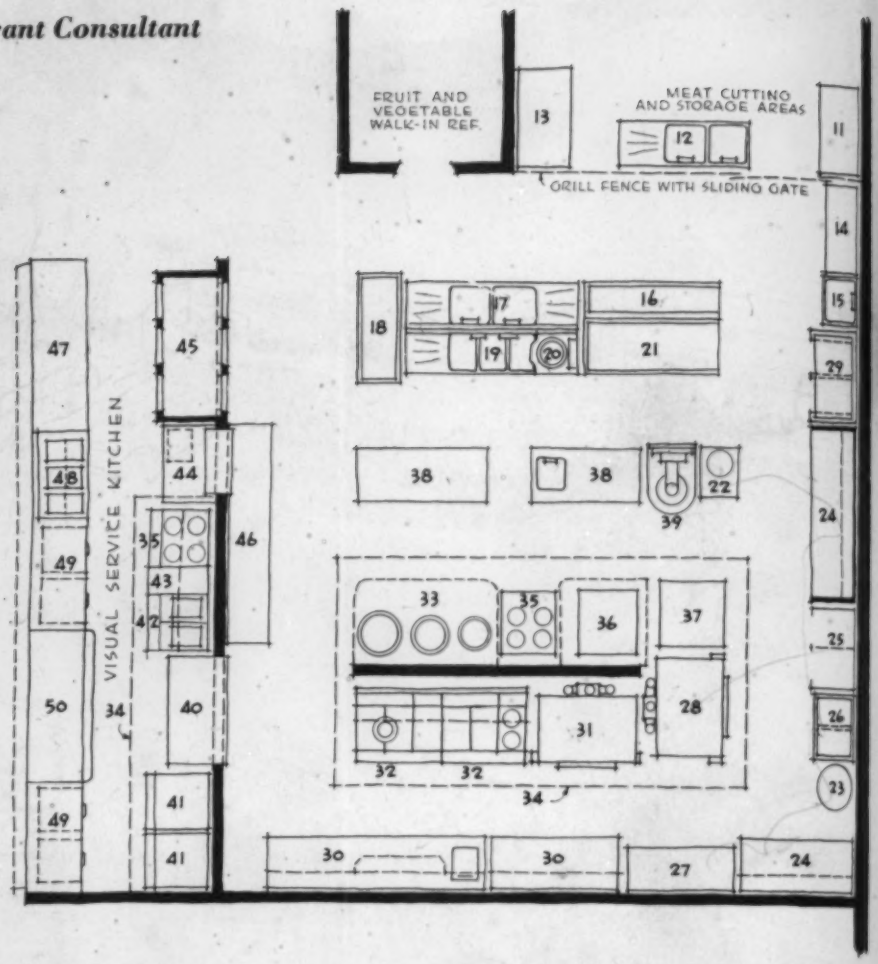




The cashier, just within the lobby space, has visual control of all dining areas, also of the serving kitchen and the dish-washing room. Kitchen has been scientifically designed by Arthur W. Dana, kitchen consultant *(see next page)*

Kitchen Plan for Highway Restaurant

Arthur W. Dana, Restaurant Consultant

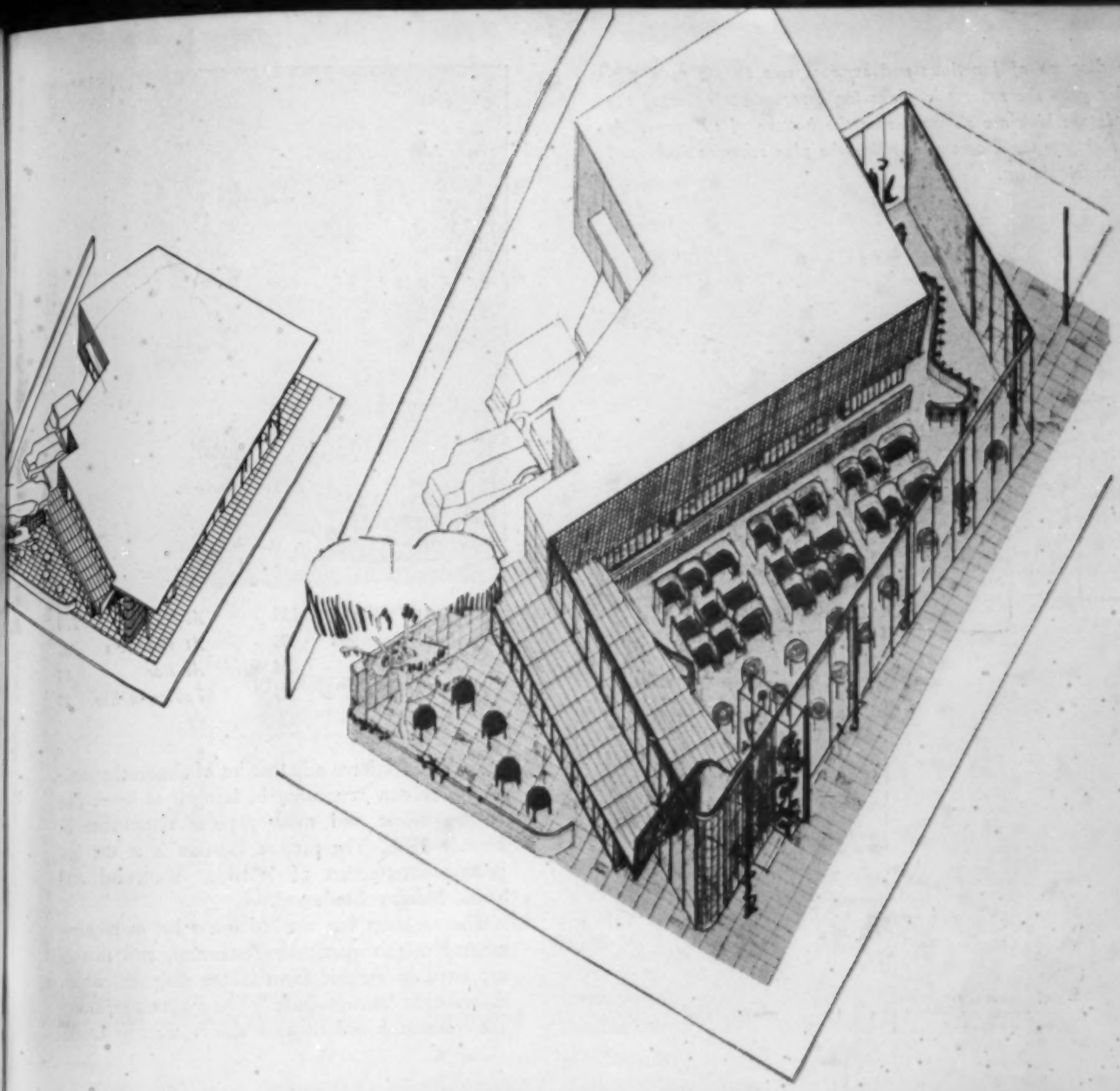


LEGEND

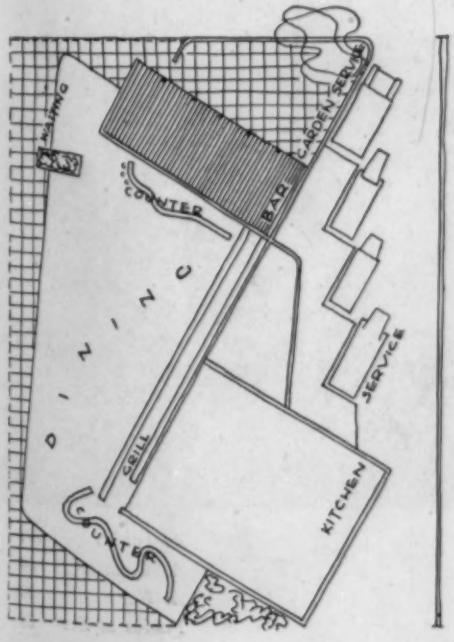
1. Receiving table with counter scale
2. Platform scale
3. Steel shelving with cabinet doors as needed.
4. Raised platform pipe for bulky stores
5. Ice maker
6. Refrigerator compressors in double-deck tiers
7. Utility table for meat chopper
8. Utility table for meat cutting
9. Electric meat & fish saw
10. Meat cutting block
11. Utility table for meat cutting
12. A 2-compartment sink with single drain board
13. Utility table for meat cutting
14. Mop and brush cabinet
15. Mop sink
16. Shelving (pipe) for clean pots and pans
17. Pot washing sink with drain boards
18. Shelving (pipe) for soiled pots and pans
19. A 3-compartment vegetable and salad sink with one drain board
20. Electric potato peeler with chute over sink compartment
21. Raised platform (pipe) for storage of potatoes in bags or bushel and service storage for vegetables awaiting cleaning
22. Portable dough divider
23. Portable pastry mixing bowl
24. Pastry work table with vertical risers on three sides, tool drawers and open understructure for portable containers; shelf above
25. Proofing cabinet with electric evaporator
26. Portable pastry rack
27. Storage cabinet with sliding doors
28. Double deck baking oven
29. Baker's refrigerator
30. Cook's tables; one to have sink and overhead pan rack; shelf above and slatted shelves below; tool drawers
31. Double deck roasting oven
32. Range tops (skeleton without oven, but with back panel and d.d. upper shelf)
33. Three steam-jacketed kettles, 30-gal., 15-gal. and 10-gal. capacities set in recessed trough
34. Overhead ventilating hood with grease filters
35. Open top range with oven below and d.d. shelf above
36. Vegetable steamer with 3 compartments
37. Vegetable and salad work table with utility sink
38. Vegetable and salad table with food chopper and French-fry cutter
39. 60-30 qt. electric mixer
40. Food and dish warmer with shelf doors on both long sides
41. Heavy duty gas broiler
42. Twin gas deep-fat fryer with shelf above
43. Spreader plate and shelves below and above
44. Utility table, pass-thru window and sink below
45. Reach-in refrigerator with doors on two sides
46. Utility table
47. Dessert and salad service counter with shelves below
48. Ice cream cabinet with service shelf above
49. Counter height refrigerator with work top and four refrigerator drawers
50. Electric hot food table with six interchangeable panel insets, service shelf above, cutting board

HAVING selected menu patterns and analyzed kitchen equipment requirements in terms of quantities of food (see ARCHITECTURAL RECORD, July, 1945, p. 72) the kitchen planner is ready to work out the most efficient system and layout. Here the receiving, storage and meat-cutting areas are separate from the kitchen itself (that's why the first 10 items of the legend are missing from the plan), for better control of costly merchandise, also here to serve the barbecue kitchen.

Vegetable preparation (Items 16-21) is simplified by having storage racks adjacent to the sink, and pot and pan storage near the pot-cleaning sink. High pressure vegetable cooking is facilitated by providing an open top range (35) and a utility sink (37) for cooling the cookers. Double-deck roasting ovens (31) separate from range tops (32) give good accessibility and convenient heights. Work space directly opposite is very important (30). The visual service kitchen includes: food and dish warming cabinets, gas broilers, deep fat fryers, open-top range for sauteing and frying, utility table and sink, and refrigerator. On the front counter are refrigerator drawers, electric hot food table, salad counter and ice cream cabinets.



ANALYSIS OF RESTAURANT SPACE AND LAYOUT



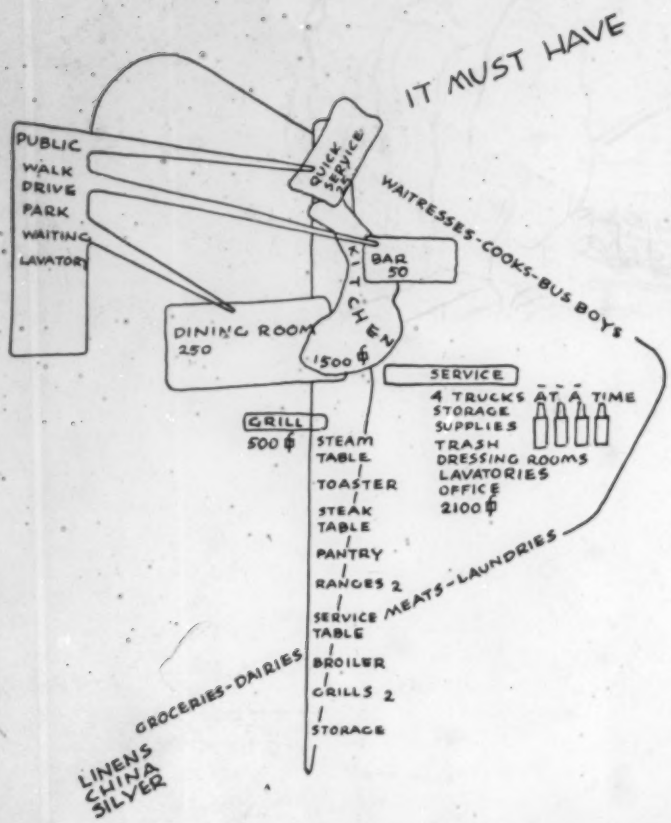
Sumner Spaulding, Architect

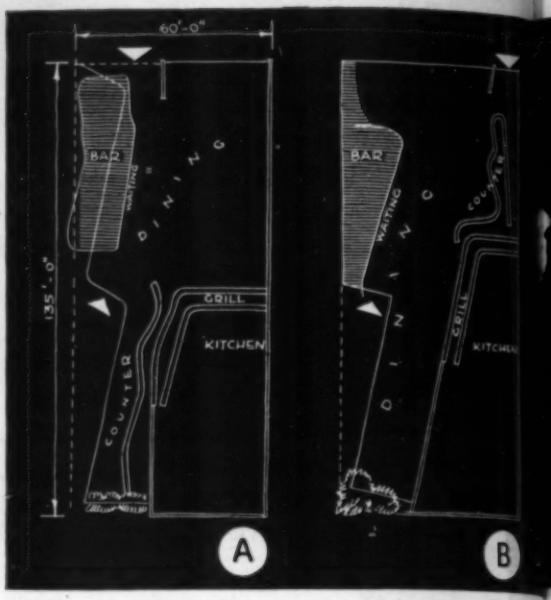
ARCHITECTURAL design involves many factors, not the least of which is that of analyzing the client's problem and presenting a number of possible solutions, so that they can be compared on a practical, economic, and operating basis. The studies here shown are a portion of the analysis made by the architect in order to help the owner to come to a realistic decision as to the amount of space needed for the operation of his restaurant, and also the layout of that space in such a way as to provide both maximum attractiveness for his clients and maximum operating efficiency.

Two sets of studies were made: one, on a lot which measures 135 feet by 60 feet. The second scheme shows the possibility of

Cut-away aerial perspective and plan of scheme for "C" which helped the owner to visualize his projected building. Various schemes for single and double lot coverage are shown on the following pages

The diagram of functions and services was set up as a preliminary to the schematic plans for a restaurant covering the two lots, which are shown across the bottom of the page. At the right are the diagrams showing the plan schemes developed for the single lot.

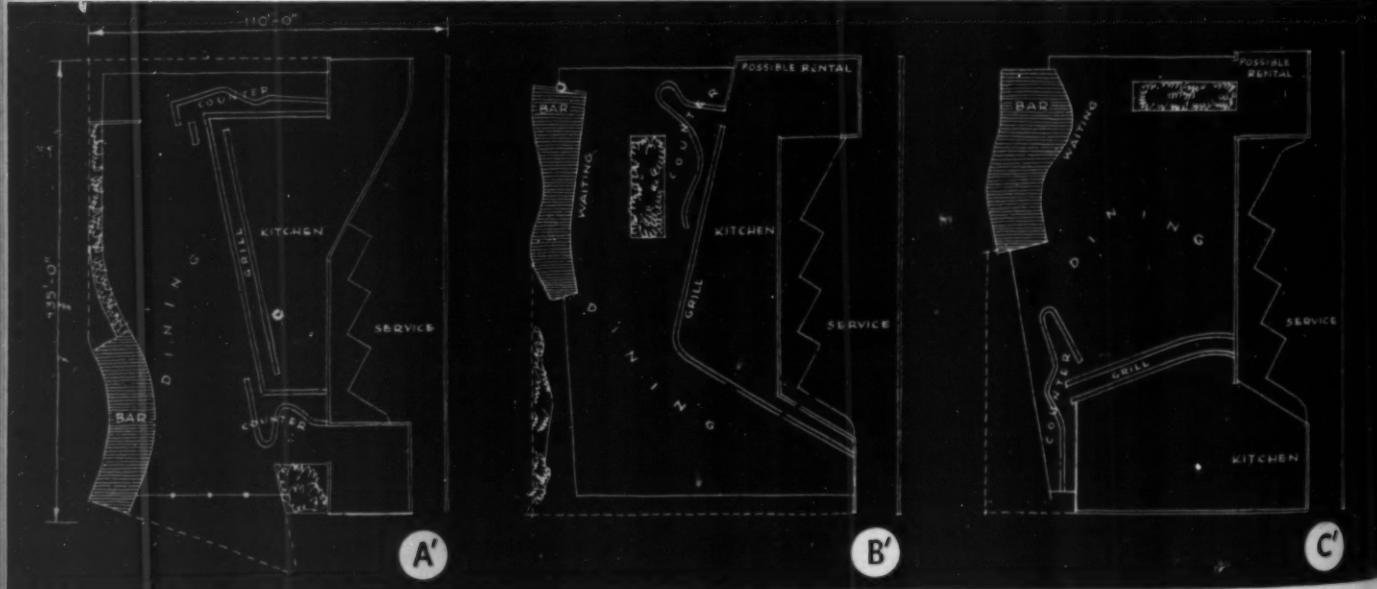




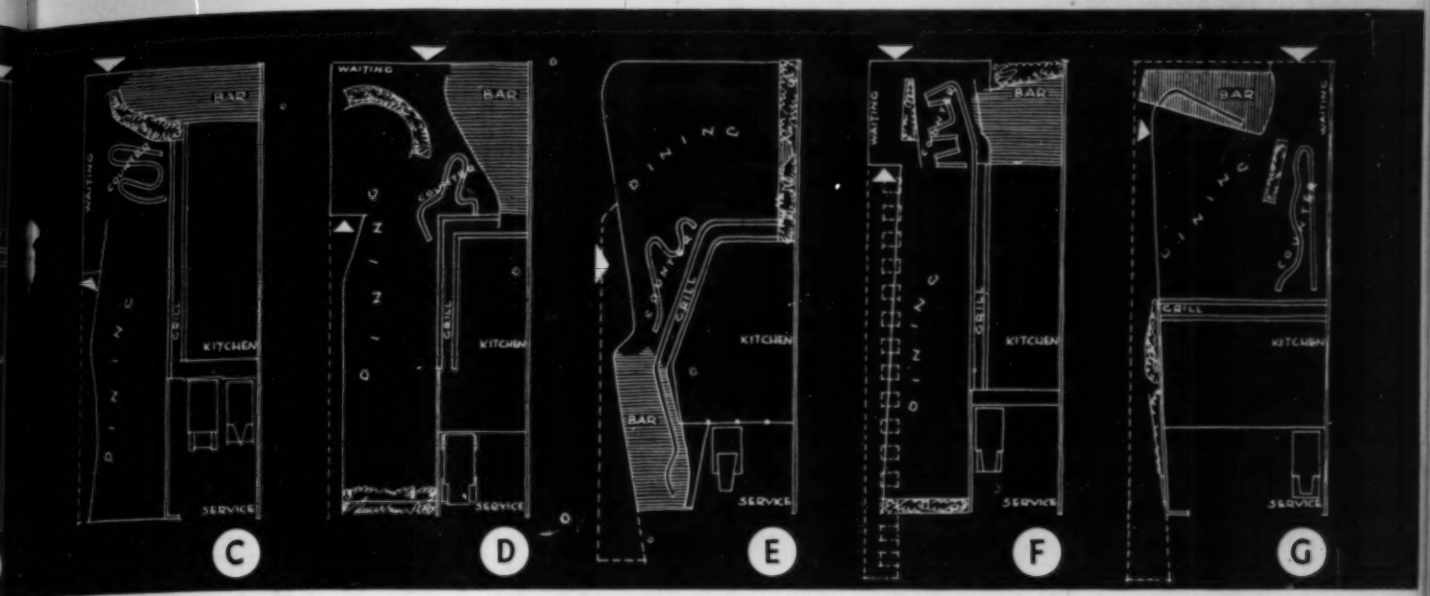
At Tables	135	*At Tables*	170
At Counters	35	*At Counters*	35
At Bar	24	*At Bar*	24
Tables at Bar	25	*Tables at Bar*	25

using an additional adjacent lot of almost the same size. The new restaurant building is to house one of the oldest and most popular restaurants in Beverly Hills. The present location is at the important intersection of Wilshire Boulevard and Santa Monica Boulevard.

The architect has worked out a list of requirements for this particular restaurant, and that is expressed in graphic form in the diagram, which shows what "it must have." The diagram separates the various functions and shows their interrela-



At Tables	276	*At Tables*	275	*At Tables*	270
At Counter	30	*At Counter*	30	*At Counter*	30
At Bar	24	*At Bar*	24	*At Bar*	30
Tables at Bar	25	*Tables at Bar*	25	*Tables at Bar*	25

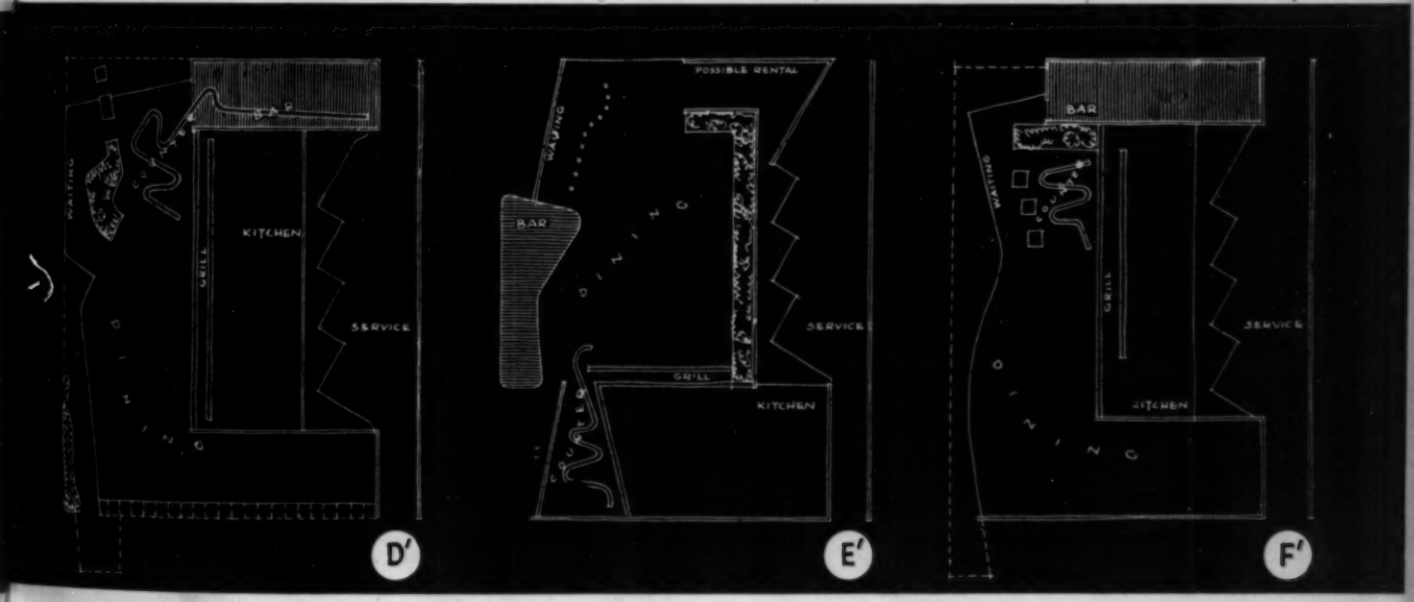


At Tables	*110*	*At Tables*	*110*	*At Tables*	*154*	*At Tables*	*160*	*At Tables*	*150*
At Counter	*30*	*At Counter*	*30*	*At Counter*	*30*	*At Counter*	*30*	*At Counters*	*40*
At Bar	*24*	*At Bar*	*24*	*At Bar*	*25*	*At Bar*	*20*	*At Bar*	*20*
Tables at Bar	*25*	*Tables at Bar*	*25*	*Tables at Bar*	*25*	*Tables at Bar*	*25*	*Tables at Bar*	*25*

tionships, based on the predetermined requirements of a restaurant seating 250 in the dining room, providing quick service for 25, and a bar serving 50. The grill, delivery, food preparation, and cooking services are all carefully considered.

Within the limitations of the lots, many different arrangements of facilities and services are possible, and these have been tried out in schematic plan diagrams to show the possible maximum number of customers that can be accommodated at tables, counter, and bar. Such an analysis is extremely important to a restaurant owner, for maximum seating without crowding means maximum profit.

A preliminary diagrammatic analysis of this kind is a distinct contribution on the part of the architect to the success of the restaurant. For that matter, it would be equally desirable in connection with any other type of building, for it gives the owner an opportunity to analyze his operational problems and possible financial returns to choose the best scheme, and to proceed with confidence.



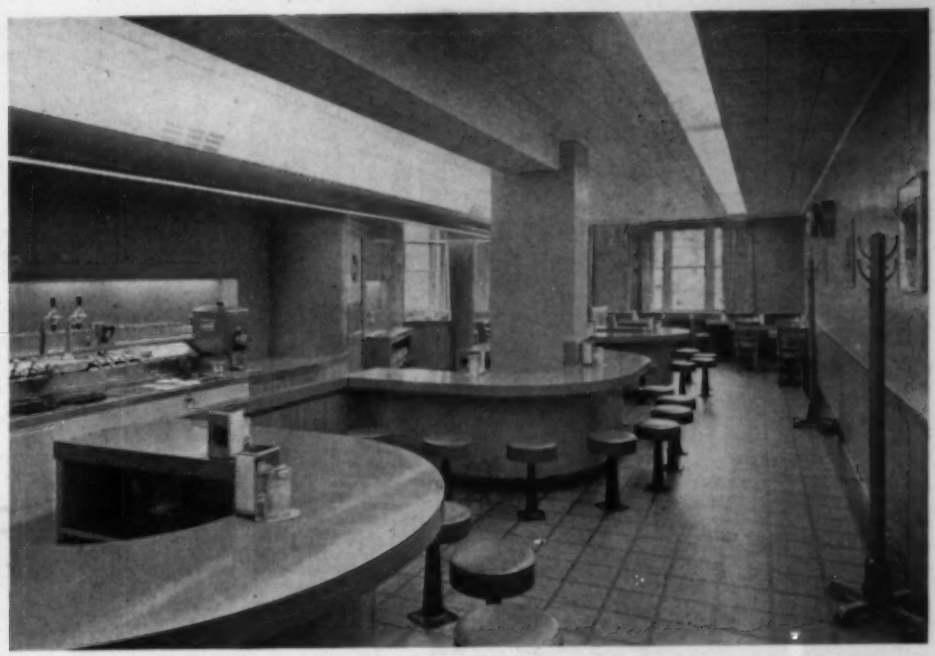
At Tables	*270*	*At Tables*	*264*	*At Tables*	*240*
At Counter	*30*	*At Counter*	*30*	*At Counter*	*35*
At Bar	*30*	*At Bar*	*25*	*At Bar*	*30*
Tables at Bar	*30*	*Tables at Bar*	*25*	*Tables at Bar*	*25*

FOR PLANE PASSENGERS AND PERSONNEL

Two Airport Restaurants for Sky Chefs, Inc.

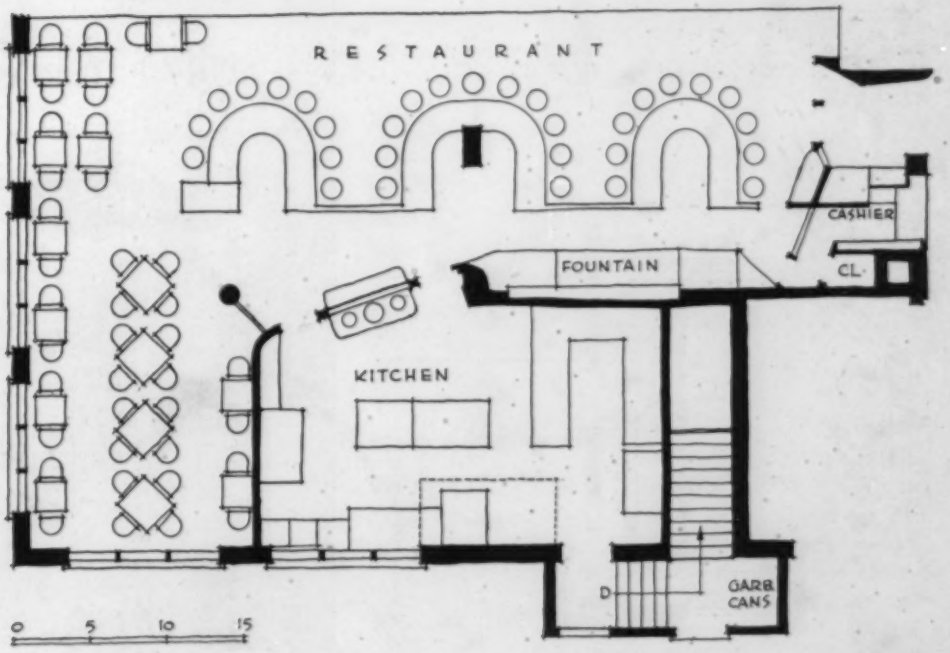
J. Gordon Carr, Architect

BEGINNING its career just a month before Pearl Harbor, Sky Chefs, Inc., has been carried aloft with increasing air traffic until it now comprises a chain of a score of airport restaurants. Construction and design have hardly known anything but wartime conditions, but occasionally the operations have been blessed with priorities, so important were eating facilities to air travelers. Designwise, the earlier units were born with the benefit of architectural attention; Mr. Carr got them started by doing



the first two or three, and by designing trade mark, china and tableware, uniforms, menus, color schemes and such.

Starting in crowded quarters, with strong emphasis on counter service, the restaurants have shown trends mentioned in ARCHITECTURAL RECORD's Airport issue of last April, notably the encouragement of airport visitors who may be but casually interested in flying. Later restaurants show a separation of the counter from the main dining room, the former serving mainly airport personnel, the latter designed for family custom. These restaurants give a third type of service—meals for in-flight plane passengers. It is interesting to note that this service, contracted for by the airlines, amounts to about half the business; the counter service for about 45 per cent. In wartime

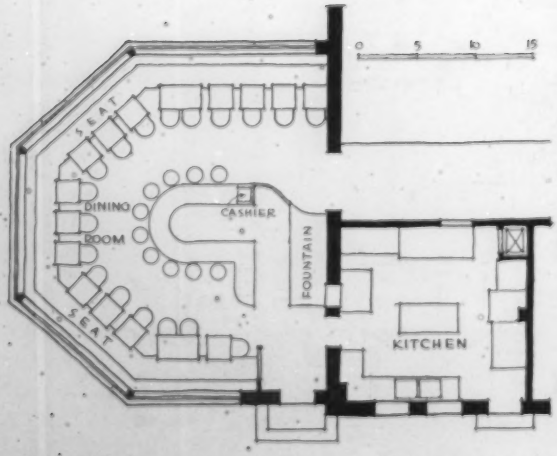


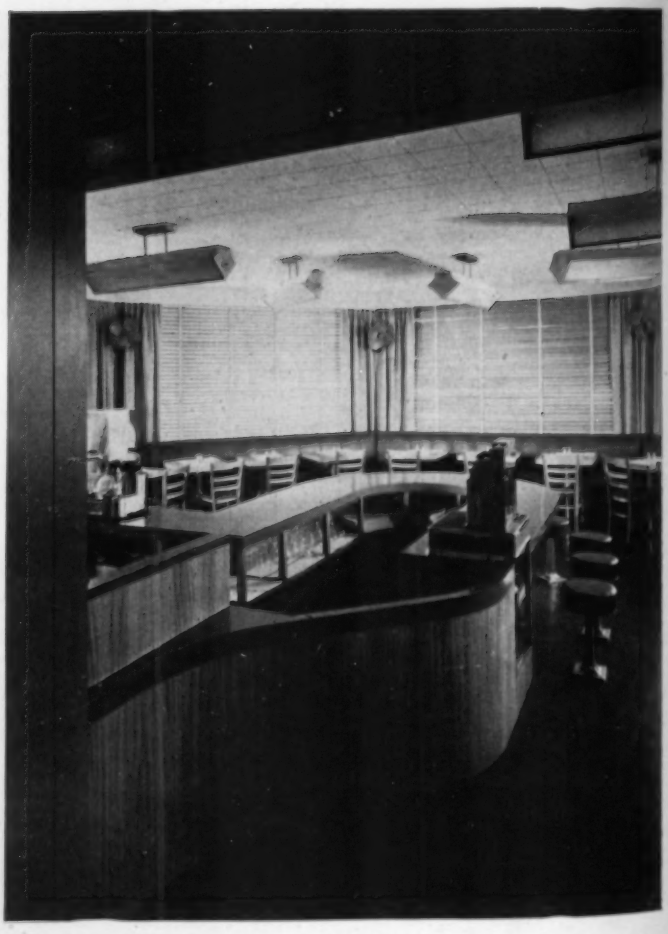
Hartford unit of Sky Chefs, Inc., an example of coordinated design where the architect's control extended even to tableware

the family-type portion has been held down, but is expected to develop importantly when the family car attains full usefulness.

This triple service has brought unique kitchen planning problems—see Time-Saver Standards, pp. 122, 123 and 125.

The unit on the preceding page is one of the early ones, at busy El Paso Airport; the one on this page is Hartford, Conn., also one of the first smaller units.

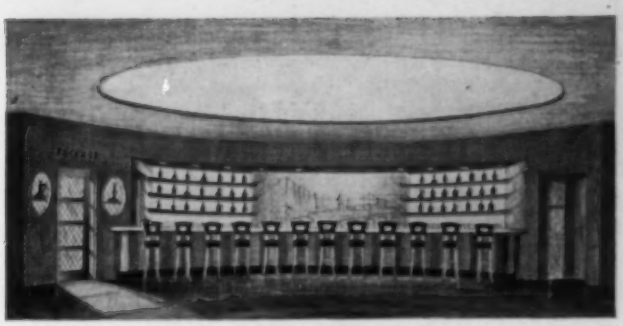


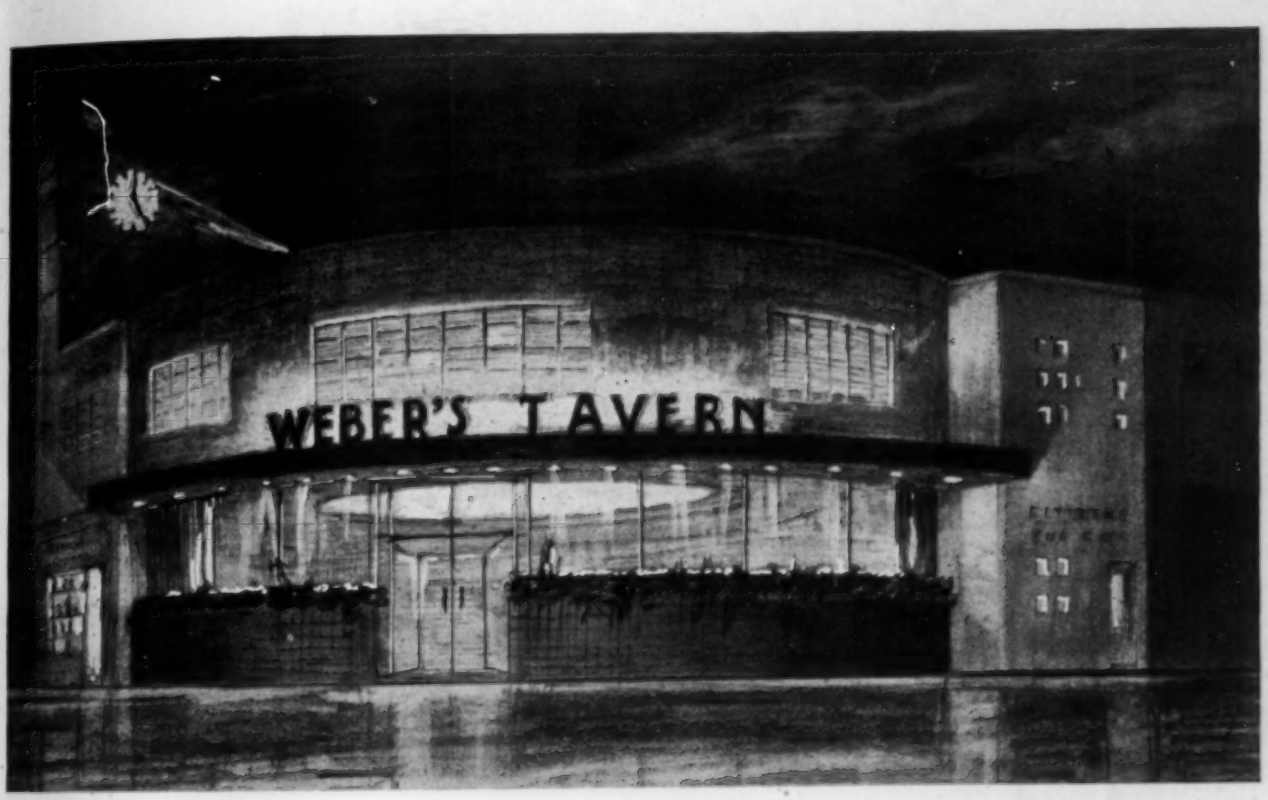


TAVERN DESIGNED FOR DOUBLE DUTY

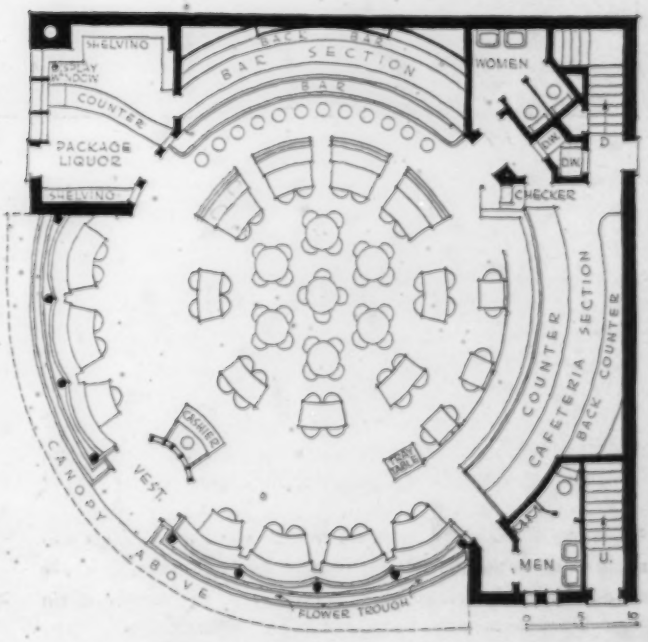
Cafeteria and Tavern Combination

Alton, Ill.





Hugo K. Graf, Architect



BEARING no resemblance whatever to the old-fashioned saloon, here is a tavern designed not only for modern methods of liquor selling, but also for other purposes as well. Since it will occupy a good downtown location, it will be called upon to do a great deal of noonday serving; thus it is designed to double as a cafeteria. Later in the day it will be a tavern; still later a favorite night spot.

The glass front can be opened as occasion demands, or closed as desired by curtains. Below the windows the exterior will be of glass block. The main floor will be spanned with trusses to keep it open. The space between trusses will be convenient for air conditioning ducts for both first and second floors, the second leased to a bus company. Various flues and shafts are gathered together to make an ornamental feature, with a large, spotlighted clock.

A SAGA OF RESTAURANT ARCHITECTURE

What a Restaurant Chain Operator has Demanded of his Architects over a 50-Year Span

When the Clark restaurants started, 50 years ago, design was much less important than five-cent griddle cakes, but the wing-collared proprietor soon got religion, and as the chain grew he came to rely more and more on architects

BACK in 1896, when the bicycle rack and hitching post adorned the front of the typical restaurant, J. B. L. Clark started the first unit of what became the chain of Clark restaurants in Cleveland. Obviously "The New Idea Dairy Lunch" was not much concerned with the services of architects. But it wasn't long before Clark began to appreciate the element of design, and he and his sons have relied on it heavily to draw customers into more and bigger restaurants.

If he dictated to his designers it was for strictly business reasons. He wanted architects to create a certain specified "atmosphere"; he was not interested in design as such. The interesting thing about it, looking backward, is that the desired atmosphere changed as the business and times

Next came the white-tile era, when restaurants sought to display the virtue of cleanliness. Later the Clark restaurants changed to home atmosphere, when women began to desert their own kitchens. Thus the Colonial styles came to dominate the Clark restaurants, a notable example (below) in the heart of Cleveland's downtown section. Paul Ockert, architect

progressed, passing through two or three distinct stages.

In the days of the New Idea Lunch, restauranting, at least in that locale, was a rough and ready business of counter service, of twisted iron chairs, of fly-specked walls and ceilings. Restaurant food, except perhaps for eggs boiled in the shell, was always under suspicion. People said, "I'd rather have a slice of bread in my own kitchen than the best meal put out by any restaurant." So Clark's decided to change it to "Clark's is a clean place to eat."

Thus began a white-tile era of vitreous cleanliness, which, wherever it began, swept the country's eating places. This type of design had no Beaux Arts background, but it did a service to restaurant proprietors. Maybe it did it so well that the service was no longer necessary—customers came to accept restaurant food without undue concern. At any rate design passed on into another stage.

In the early Twenties women began to take their meals away from home. These were days of the advertising slogan, "like *mother* used to make," which might have been, "like mother *used* to make." Restaurants became less insistent on white tile, and began to emphasize a homelike character. To Cleveland, a city largely settled by pioneers from New England, "home" was naturally taken to mean Colonial designs and decorations. Clark's decided to remodel old restaurants and design new units to look as much as possible like the Colonial dining rooms of a comfortable home. Paul Ockert, Cleveland architect, did a number of units, by this time fairly large ones,

Shaker Hts.

Clark's "Shakertown," ~~Cleveland Heights~~

Munroe Walker Copper, Jr., Architect

with Windsor chairs and copper light fixtures and many other distinctly Colonial devices.

One of the most ambitious of the Colonial projects, which became uncommonly successful and came to be known as the chain's favorite unit, was a Southern Colonial adaptation in the midst of downtown office buildings. Its two-story entrance is recessed behind the white pillars, and the "porch" space is kept gay with tiny gardens. The gardens became something of a publicity feature; local garden clubs and landscape architects maintain a constantly changing display. There is a place inside, too, where artists and sculptors display their work.

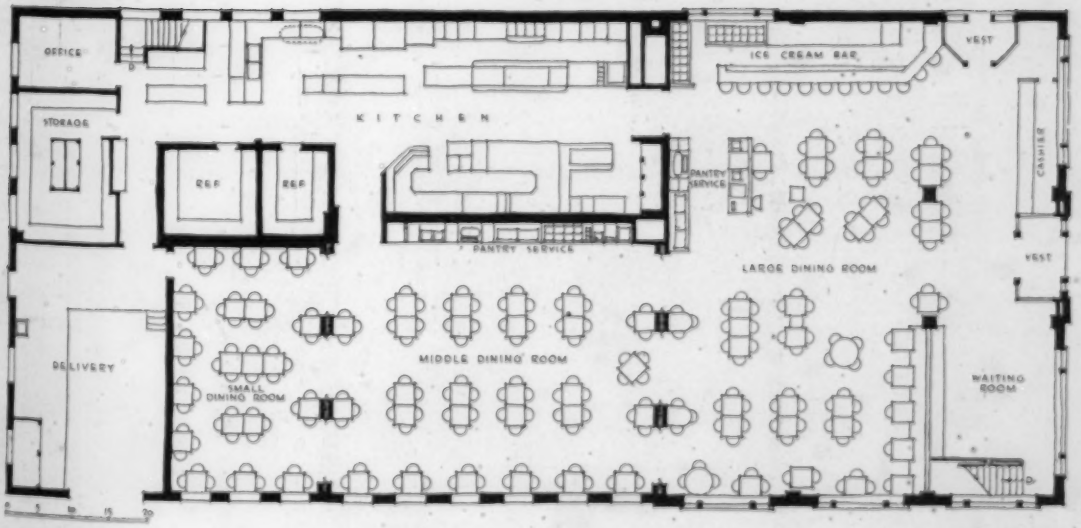
Photos on these two pages show one of the recent large suburban restaurants in the Clark chain, this one by Architect Munroe Walker Copper, Jr.

Here, as in others of the chain, the restaurant is broken into different dining areas, decorated in the Colonial style that still prevails. Waiting room is a Colonial living room, and dining rooms have wood dados, wall paper, old engravings, candlesticks, Currier and Ives prints.

It will be seen that the Clark restaurants have leaned heavily on architects, and have also followed trends that have been fairly general for restaurants of their type. They have been notably successful in capturing the "family trade" that is the objective of many a restaurateur. It may be that in other cities and other circumstances diners prefer something more glamorous than a home atmosphere, but the Clark restaurants are still doing all right.

Superior Studios photos

Conscious of the New England background of Ohio people, the Clark restaurants for years have featured Colonial styling, making an especial bid for the "family trade"



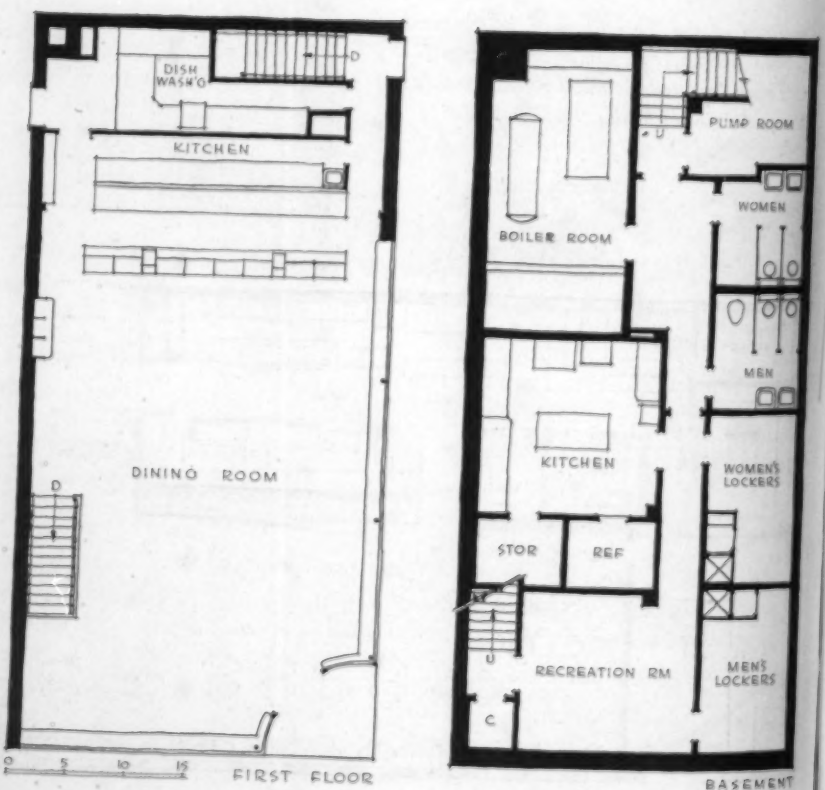
NEW NOTES BRIGHTEN AN OLD NAME

Restaurant for John R. Thompson Company • Chicago, Illinois

Kaufmann & Fabry Co. photos.

James F. Eppenstein,

Architect



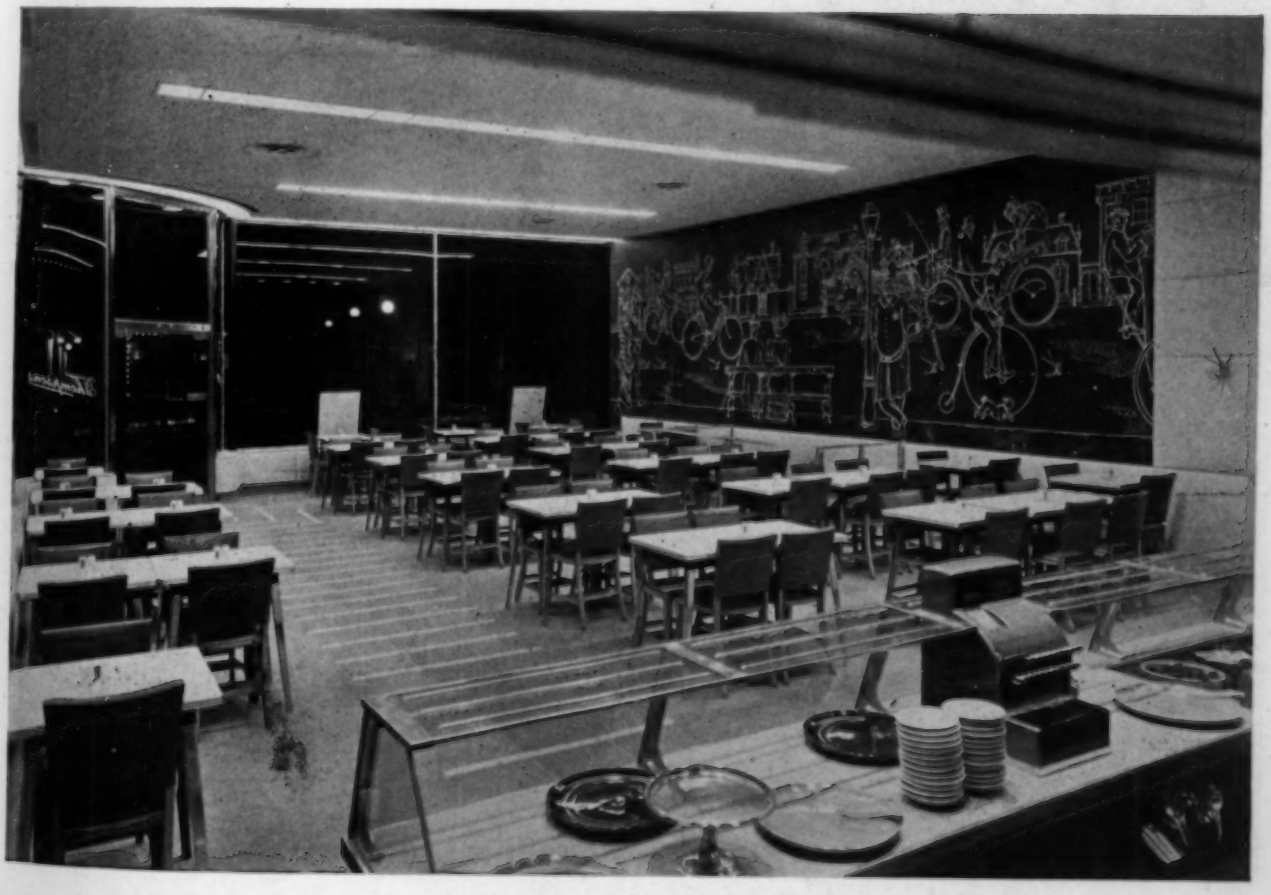
For a great many years in many cities Thompsons self-service restaurants have been familiar alike to the hungry worker and the wee-small-hours wanderer. The type of service—and the logotype—have been standard for a long time. But here is evidence that the restaurant design is by no means hidebound. For this unit, on Chicago's South Michigan Avenue, the architect has introduced not only some modern notes but also a refreshingly light touch.

Exterior treatment is dark red and cream-colored structural glass, with extra high windows clear to the ceiling height and tempered glass doors. The red and cream are carried out on the interior in terrazzo floor, plastic table tops and leather upholstery. Walls and front of counter are flush-type leather-covered panels. The huge mural is a cream drawing on a dark red background.

The entire space is air conditioned. The glass doors have balanced door checks to equalize pressure and keep doors from blowing in a heavy wind.

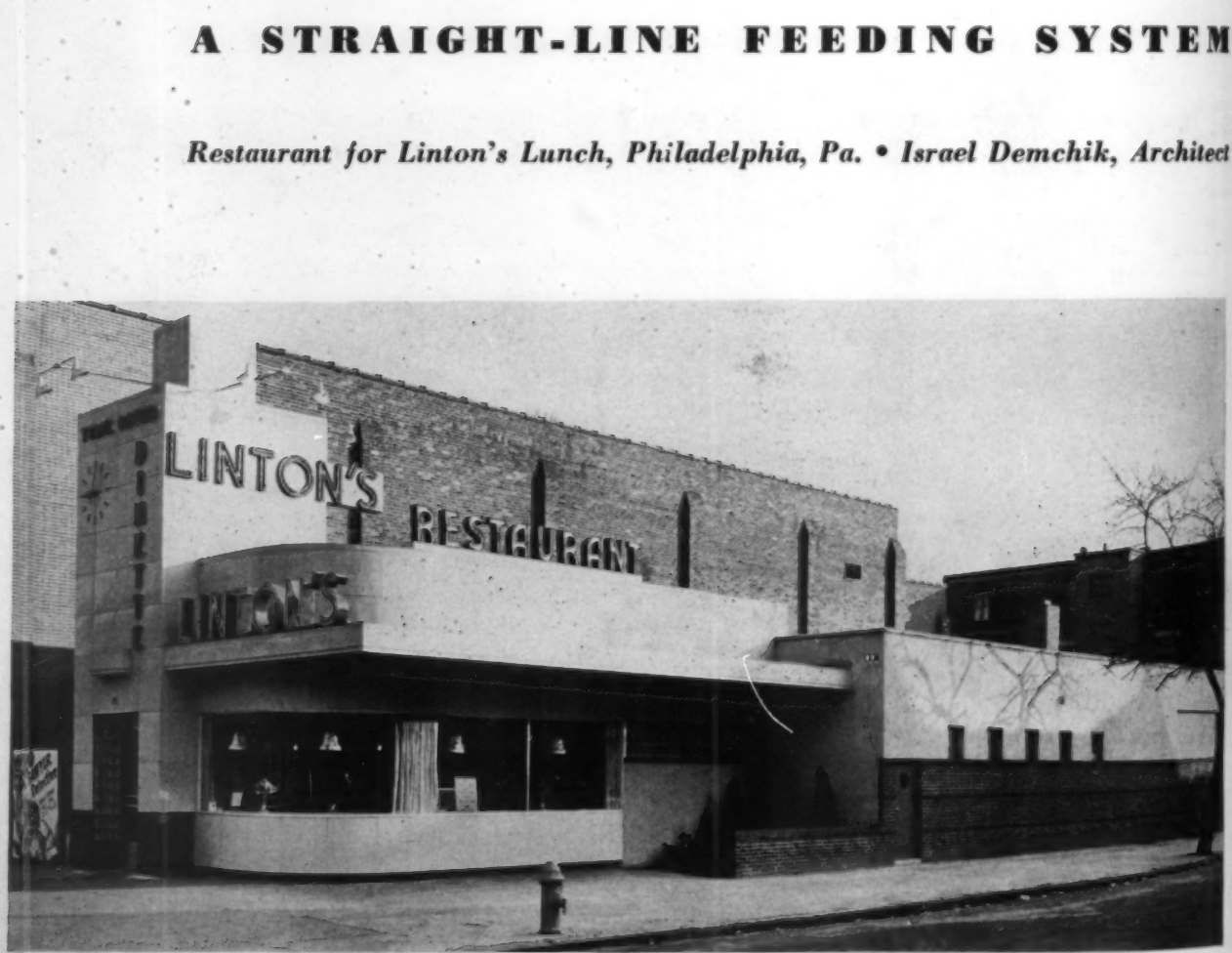
Lighting is a combination of fluorescent and incandescent, in recessed strips across the ceiling. The fluorescent tubes were chosen in an assortment of colors, to give the most natural possible color to the various foods. Coffee with cream in it and butter are peculiarly susceptible to odd color effects, and considerable study went into choosing fluorescent colors that would not spoil appetites.

The basement kitchen, called a "stew kitchen," is a familiar Thompson device to free main floor space.



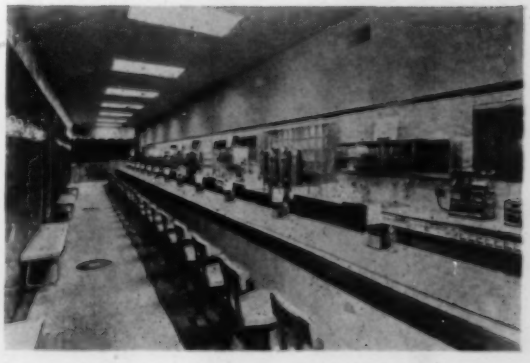
A STRAIGHT-LINE FEEDING SYSTEM

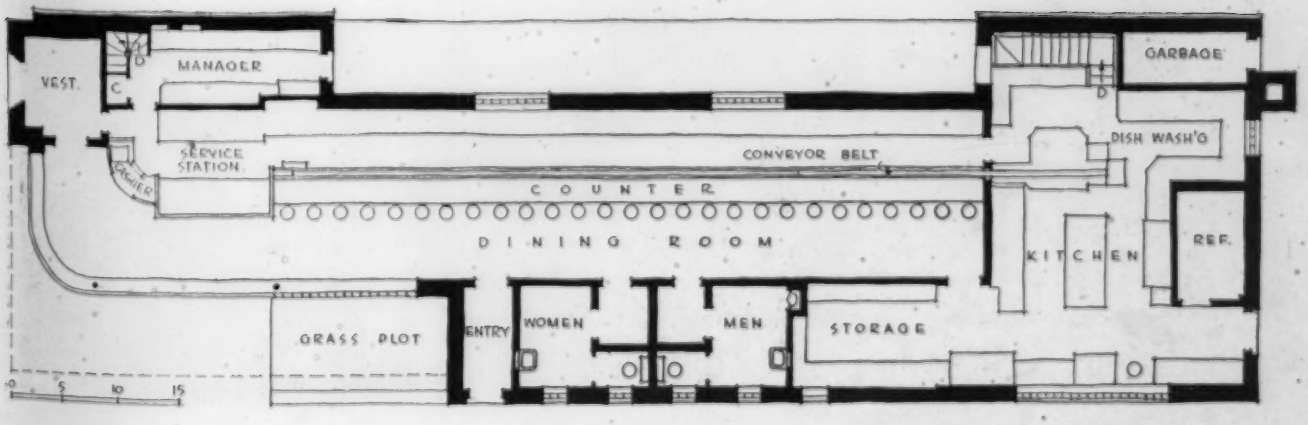
Restaurant for Linton's Lunch, Philadelphia, Pa. • Israel Demchik, Architect



HERE is a restaurant which, for all of its sparkle, is devoted to fast feeding, literally by conveyor methods of handling. It is one unit of a large chain of "Time Saver Dinettes," many of which take deep, corner locations and give quick counter service. This one has only 27 seats but serves more than 2500 people a day.

The Linton chain features the conveyor belt method of bringing in food orders and also taking out the dishes. An endless belt conveyor runs from the kitchen along the long counter. Orders come in on the top belt, at about the height of the counter. Dishes return to the kitchen on the lower part of the belt. In the kitchen the food service area is at one side of the belt, dish washing at the other. Waitresses remain at their stations, and the customer does scarcely any waiting at all.





SEVEN SEAS RESTAURANT IN MIAMI

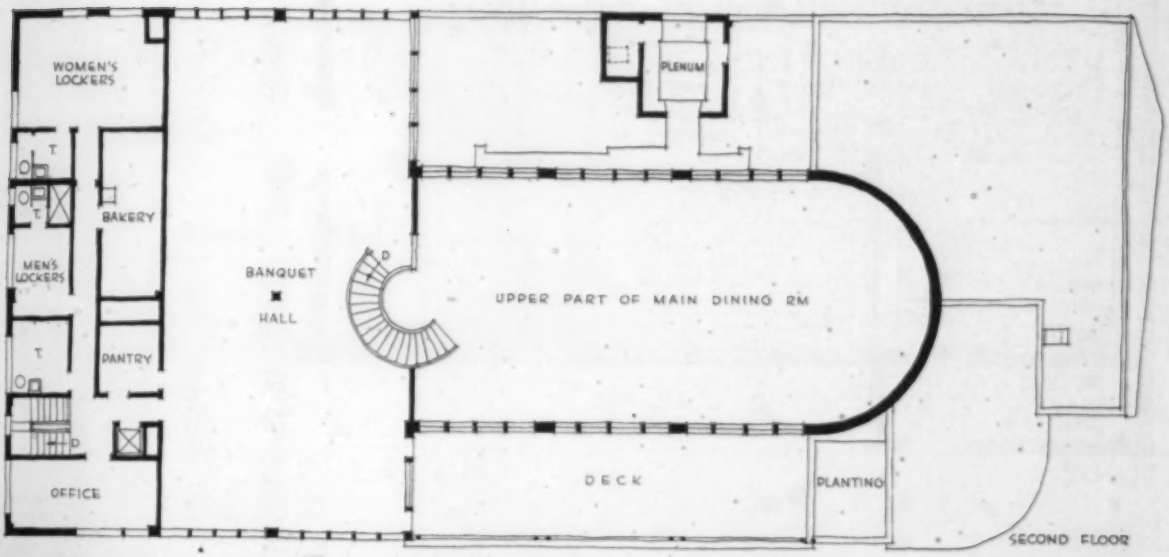
Igor B. Polevitzky

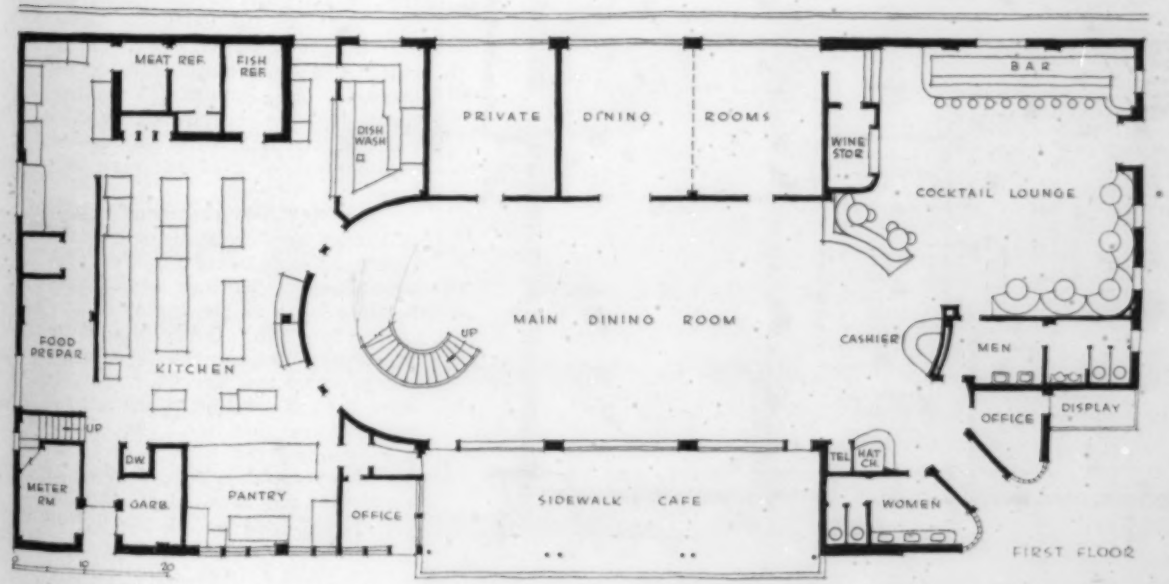
and T. T. Russell

Architects

One would scarcely need to be told that this is a Florida seafood restaurant. But naturally that fact dictated its design. That, plus the additional fact that it occupies a strategic corner just a block from the main shopping street in Miami. Thus an important consideration was a sign that could be seen from the shopping street; from the opposite side the sign forms a terminal motif to a through boulevard which makes a 90-degree turn near the building.

The cocktail lounge is so designed that it can serve for main dining room overflow. It is, however, sufficiently screened from the main room so that the cocktail clientele is not confronted with a large bare room. Air conditioning in the lounge is operated separately, but no physical barrier is necessary because supply and return air is controlled directly at the opening between the two areas.





AIRPORT KITCHEN PLANNING

Sky Chef restaurants, serving more than a score of the country's airports, have had occasion to devote serious study to the peculiar problems of kitchen planning for a new but rapidly growing operation. The special factors of a double type of service (see page 108) do not affect the kitchen scheme unduly, but the third type—service to passengers in planes—just about doubles the kitchen area. And thus in effect adds a second kitchen to the one needed for the restaurant.

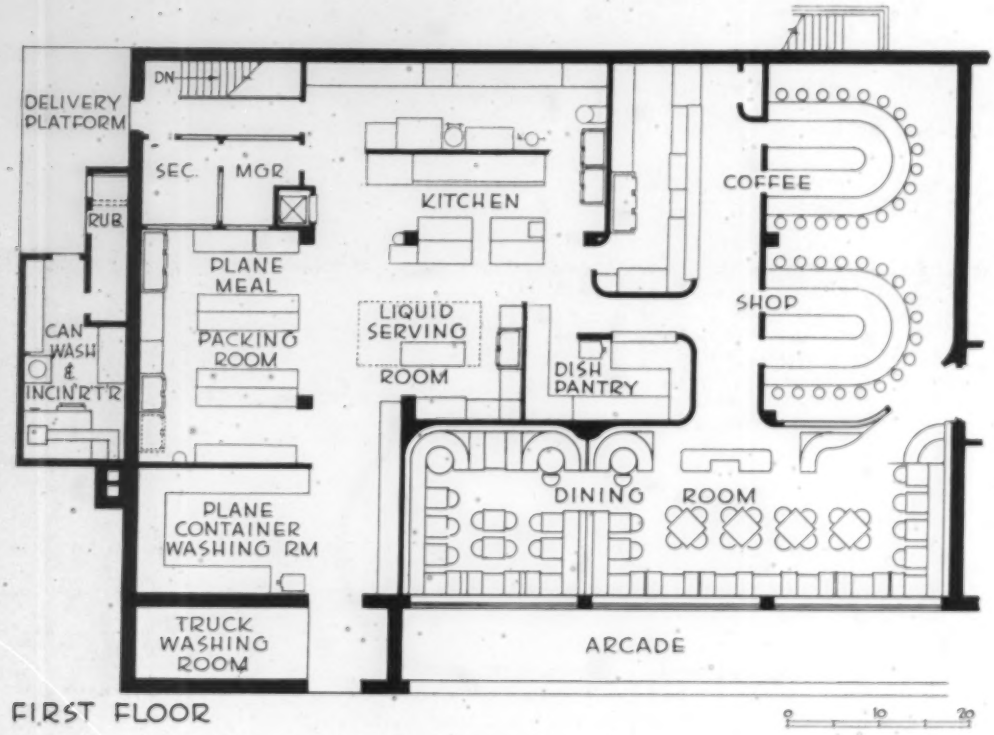
Further complications arise from the type of service required for plane passengers. For one thing, meals are not simply picked up in separate dishes by waitresses; they are individually packaged and sent out to the planes on hand trucks.

Still more important is the extra sanitation required. The average restaurant naturally expects to meet local requirements as to cleanliness and other precautions, and to operate under supervision of local or state authorities. But the restaurant serving plane passengers also comes under the eagle eye of the U. S. Public Health Service, which carries sanitation requirements to the extremes necessary for prevention of the spread of national or international epidemic diseases. An immediate requirement for the restaurant is the positive sterilization of all dishes and containers used in plane service.

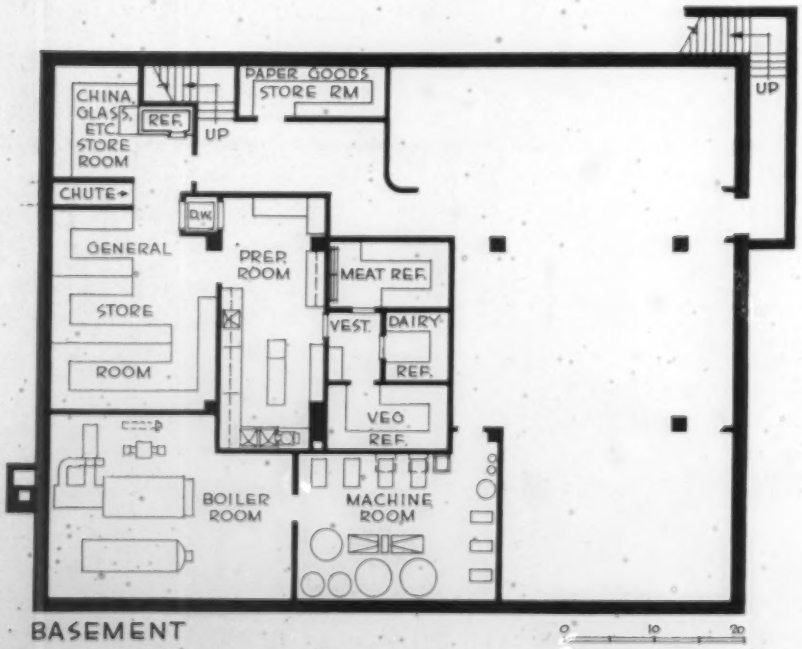
There are also the usual extras of luxury service, made more difficult here because of the transport problem—the chilling of vacuum bottles, for a single example.

In these Time-Saver Standards are shown two kitchen layouts, as designed by the Sky Chef restaurants in consultation with Nathan Straus-Duparquet, Inc.

In general the scheme is to do all heavy cooking, for all types of service, in one area, but to separate all other kitchen functions. You



FIRST FLOOR



BASEMENT

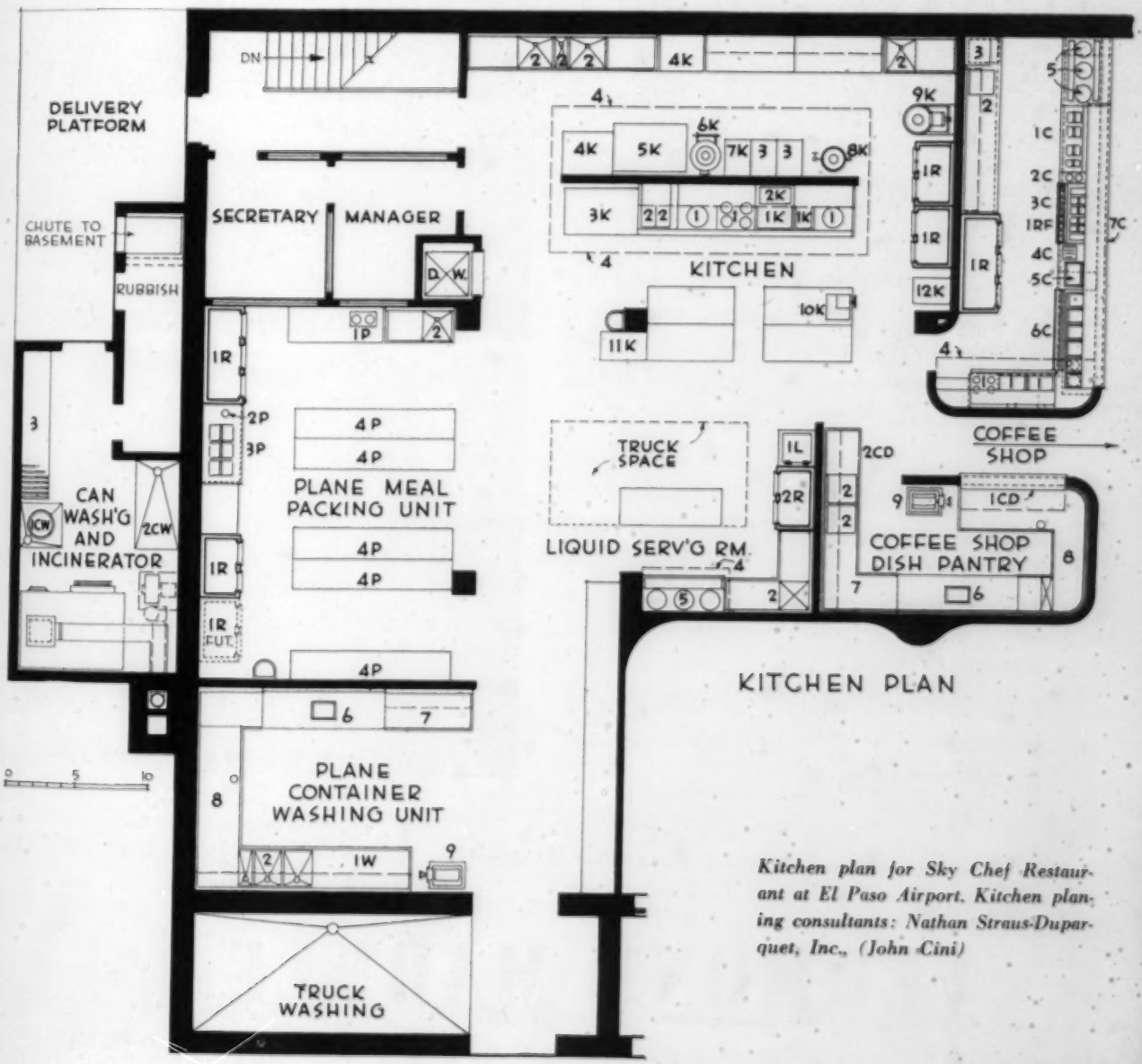
could almost partition off two separate areas, one for plane meals, the other for the restaurant areas.

Trucks come in from planes at the bottom of this plan, leave dishes and containers to be not only mechanically washed but also sterilized. Truck parking space is provided near the center of the kitchen, and near the tables (4P) where the meals are packed.

Notice in this plan that all garbage and rubbish operations are entirely outside of the building, in a small section at the left.

LEGEND

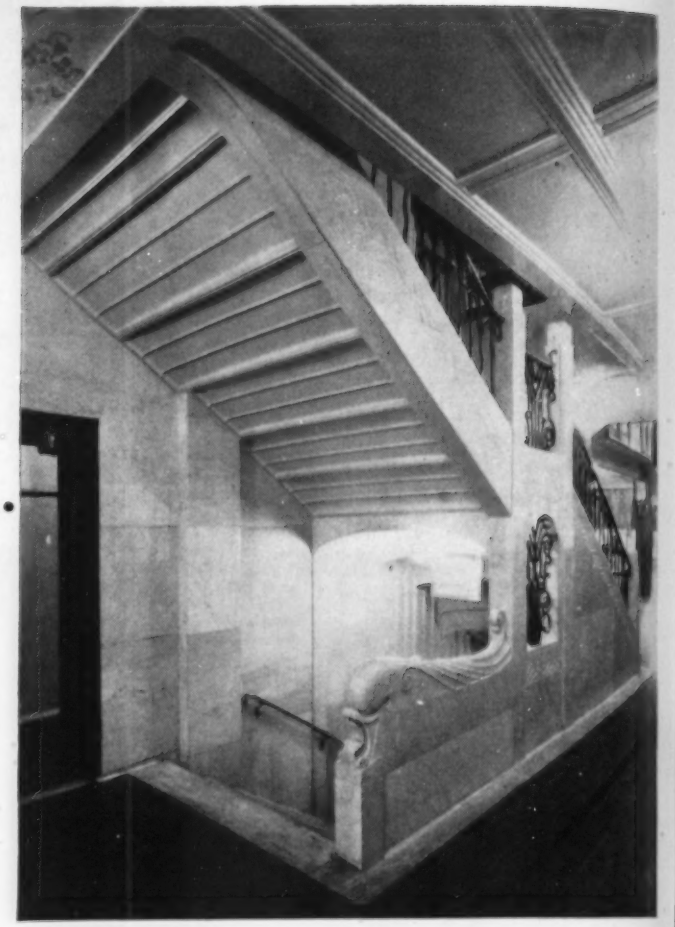
1K	Griddle	12K	Food warmer	1C	Soda fountain	2R	Vacuum bottle chiller
2K	Salamander	1L	Wet ice cab't.	2C	Disher vat and glass rinser	1RF	Dole plate
3K	Roast oven	1P	Hot plate	3C	Sandwich unit	1	Range
4K	Pot & pan stor. cab't.	2P	Disher vat	4C	Toaster	2	Sink
5K	Bake oven	3P	Ice cream cab't.	5C	Broiler—griddle	3	Rack
6K	Baker's stove	4P	Packing table	6C	Steam table	4	Hood
7K	Proof box	1W	Clean container table		Service shelf	5	Urn
8K	Trunnion kettle	1CW	Can washer	1CD	Tray rest	6	Dishwasher—sterilizer
9K	Mixer	2CW	Sorting pan	2CD	Silver table	7	Clean dish table
10K	Slicer			1R	Refrigerator	8	Soiled dish table
11K	Desk					9	Burnisher



Kitchen plan for Sky Chef Restaurant at El Paso Airport. Kitchen planing consultants: Nathan Straus-Duparquet, Inc., (John Cini)

THE MARBLE INTERIOR

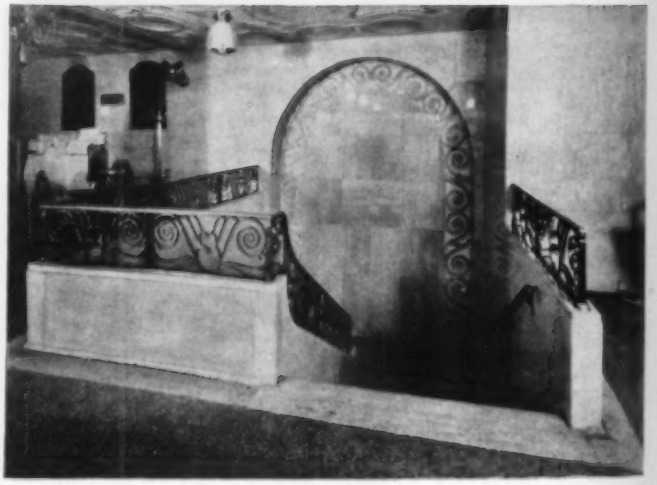
Attractive Always



When the architect chooses Marble for interiors he highlights other decorative treatments. At Horn and Hardart's main restaurant in Philadelphia, architect Ralph B. Bencker has used the warm buff color of Botticino marble to enhance the beauty of the interior. Marble work of high quality and attractive appearance means lasting satisfaction to architect and owner alike.

Marble has been chosen for many of America's distinguished interiors. It lends itself to every type of design . . . offering a wide range of beautiful, natural effects. Botticino marble is imported from Italy where large quarries were developed before the war and are expected to soon be in production again.

The aristocrat of stones . . . Marble, can be employed to good effect for simple interiors or the most pretentious.



The Vermont Marble Company, producers, importers and finishers, maintain branch offices in principal cities to serve you.

VERMONT MARBLE

Enduring Beauty

VERMONT MARBLE COMPANY · PROCTOR, VERMONT

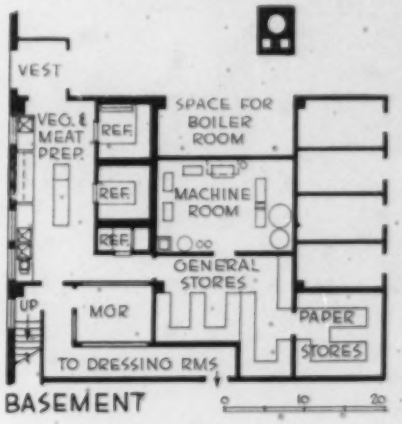
AIRPORT KITCHEN PLANNING

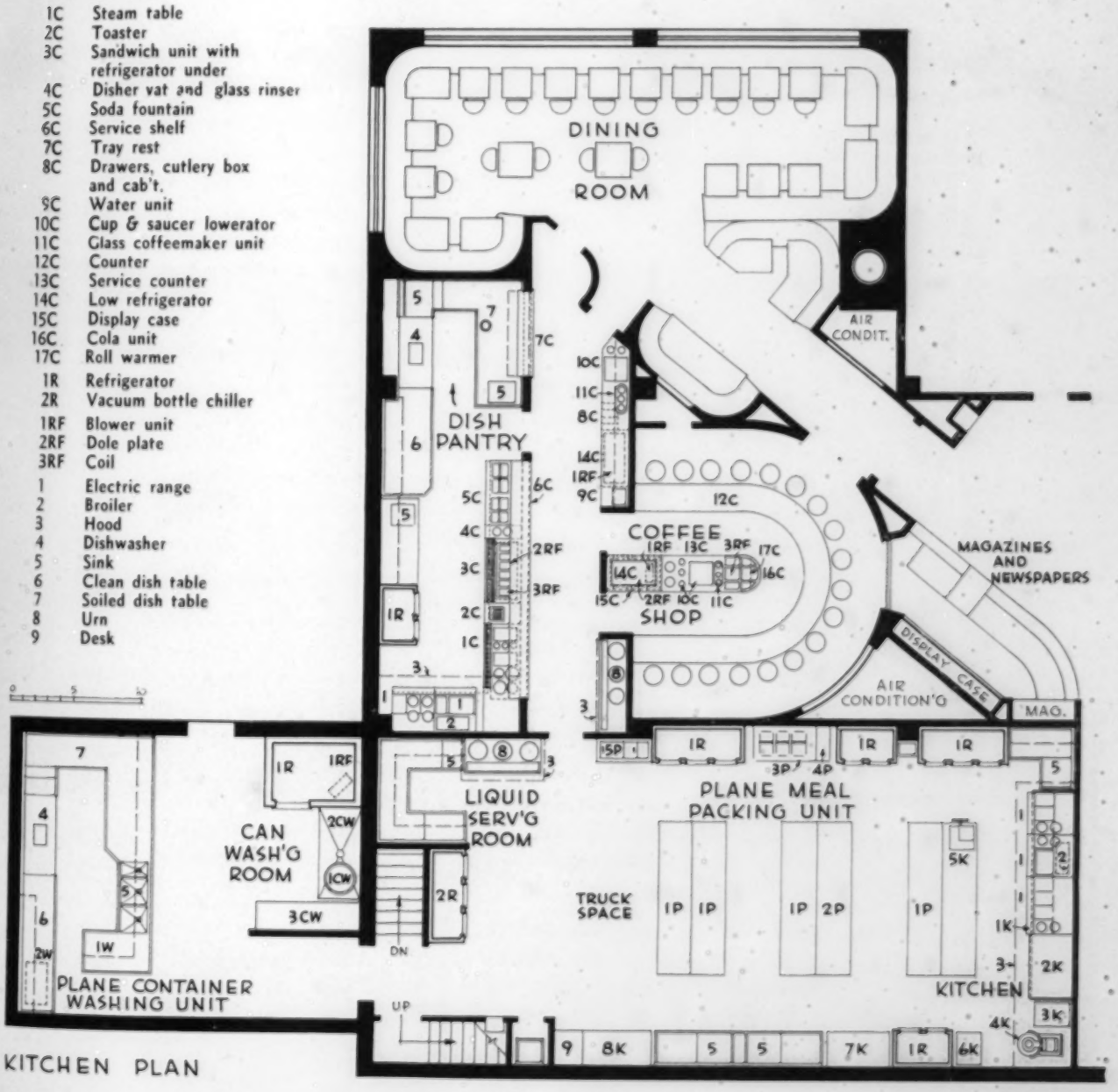
Sky Chef Restaurant, Greater Cincinnati Airport; Kitchen Planning Consultants, Nathan Straus-Duparquet, Inc.

LEGEND

1K	Additional range section
2K	Electric oven
3K	Proof box
4K	Mixer
5K	Meat slicer
6K	Pan rack
7K	Pot & pan stor. cab't.
8K	Tray carrier rack
1P	Packing table
2P	Preparation table
3P	Ice cream cab't.
4P	Disher vat
5P	Wet ice cab't.
1W	Clean container table
2W	Burnisher
1CW	Can washer
2CW	Sorting pan
3CW	Can rack
1C	Steam table
2C	Toaster
3C	Sandwich unit with refrigerator under
4C	Disher vat and glass rinser
5C	Soda fountain
6C	Service shelf
7C	Tray rest
8C	Drawers, cutlery box and cab't.
9C	Water unit
10C	Cup & saucer lowerator
11C	Glass coffeemaker unit
12C	Counter
13C	Service counter
14C	Low refrigerator
15C	Display case
16C	Cola unit
17C	Roll warmer
1R	Refrigerator
2R	Vacuum bottle chiller
1RF	Blower unit
2RF	Dole plate
3RF	Coil
1	Electric range
2	Broiler
3	Hood
4	Dishwasher
5	Sink
6	Clean dish table
7	Soiled dish table
8	Urn
9	Desk

Here again the kitchen area is virtually doubled by the requirements for serving plane passengers. Heavy cooking for the two different functions is combined in the area at the lower right of the plan. Otherwise the whole area along the bottom is for plane meal service, the upper section of the kitchen for the counter and dining room. Hand trucks from the planes come in through the washing area (which here serves also as delivery entrance) and on into the central space near plane meal packing tables. All deliveries go right to the basement storerooms.





Again, Revere is ready

Revere metals are impartial. They don't care whether they are used for battleships or baby carriages, for rockets or refrigerators, for primers or piping. That is why there are no difficult reconversion problems at Revere to slow down production of copper, brass, bronze, aluminum, magnesium, steel.

We are ready *now* to fill industry's peacetime needs.

Revere hopes that, in the conflict just ended, what we won was the gigantic opening battle for better living. To fight *this* war our nation needs materials and the products of industry on a scale even greater than that which won military victory.

One inevitable result of Revere's war effort is that not only our ability to produce, but our ability to give service, have been expanded many times. Revere research has probed further and further. Revere Technical Advisors are armed with greater knowledge and experience. New methods and new machines may save precious time or cut all-important cost.

With all these enhanced resources we are ready now to serve man's creative spirit and, by supplying industry in abundance, to help make of life the rich, joyous thing it can be.

...NOW!

Served by each of the Revere Offices is a group of Revere Distributors who can supply Revere Sheet Copper for roofing, flashing and gutters; Revere Copper Tube and Copper and Red-Brass Pipe; and other Revere products for quality building. For the name and address of your Revere Distributor, call the nearest Revere Office. The Revere Technical Advisory Service, Architectural, is always ready to serve you.

REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

Executive Offices: 230 Park Ave., New York 17, N. Y.

Listen to The Human Adventure *on the Mutual Network every Wednesday Evening; 10 to 10:30 p. m., EWT.*

DIVISION OFFICES AND MILLS

BALTIMORE DIVISION
P. O. Box 2075
1301 Wicomico Street
Baltimore 3, Md.
Phone: Gilmor 0222
Teletype: BA 164

MICHIGAN DIVISION
5851 West Jefferson Avenue
Detroit 9, Mich.
Phone: Vinewood 1-7350
Teletype: DE 237

ROME DIVISION
Rome, New York
Phone: Rome 2000
Teletype: ROME N Y 447

MAGNESIUM-ALUMINUM DIVISION
P. O. Box 2075
1301 Wicomico Street
Baltimore 3, Md.
Phone: Gilmor 0222
Teletype: BA 164

DALLAS DIVISION
2200 No. Natchez Avenue
Chicago 35, Ill.
Phone: Merrimac 2600
Teletype: CG 957

NEW BEDFORD DIVISION
24 North Front Street
New Bedford, Mass.
Phone: New Bedford 8-5601
Teletype: NB 87

CHICAGO MANUFACTURING DIVISION
2200 No. Natchez Avenue
Chicago 35, Ill.
Phone: Merrimac 2600
Teletype: CG 957

ROME MANUFACTURING COMPANY DIVISION
Rome, New York
Phone: Rome 2800
Teletype: ROME N Y 449

DISTRICT SALES OFFICES

At above Mill Points and in the following cities

ATLANTA 3, GA.
Rhodes-Haverty Bldg.
Phone: Main 2142
Teletype: AT 96

BOSTON 10, MASS.
140 Federal Street
Phone: Hubbard 7190

BUFFALO 7, N. Y.
1807 Elmwood Avenue
Phone: Delaware 7616

CINCINNATI 2, OHIO
Carew Tower
Phone: Main 0130
Teletype: CI 171

CLEVELAND 15, OHIO
Midland Bldg.
Phone: Cherry 3930
Teletype: CV 572

DALLAS 1, TEXAS
Tower Petroleum Bldg.
Phone: Central 8681
Teletype: DL 88

DAYTON 2, OHIO
Mutual Home Bldg.
Phone: Hemlock 3271

GRAND RAPIDS 2, MICH.
Keeler Building
Phone: Grand Rapids 8-0511 & 6-1314
Teletype: GR 376

HARTFORD 3, CONN.
410 Asylum Street
Phone: Hartford 2-3828
Teletype: HF 87

HOUSTON 2, TEXAS
Mellie Esperson Bldg.
Phone: Fairfax 7932

INDIANAPOLIS 4, IND.
Circle Tower
Phone: Market 1908

LOS ANGELES 15, CALIF.
714 W. Olympic Blvd.
Phone: Richmond 9314

MILWAUKEE 2, WIS.
626 E. Wisconsin Avenue
Phone: Marquette 1440
Teletype: MI 292

MINNEAPOLIS 2, MINN.
Metropolitan Bldg.
Phone: Atlantic 3285

NEW YORK 17, N. Y.
New York Central Bldg.
75 East 45th Street
Phone: MUrray Hill 9-6800
Teletype: NY 1-1222

PHILADELPHIA 3, PA.
Sixteen Sixteen Walnut St. Bldg.
Phones: Bell—Pennypacker 6133
Keystone—Race 1847
Teletype: PH 206

PITTSBURGH 19, PA.
Gulf Bldg.
Phone: Court 4342
Teletype: PG 572

PROVIDENCE 3, R. I.
Industrial Trust Bldg.
Phone: Gaspee 8110

ST. LOUIS 1, MO.
Telephone Bldg.
1010 Pine Street
Phone: Garfield 4416
Teletype: SL 191

SAN FRANCISCO 4, CALIF.
Russ Bldg.
Phone: Sutter 0282

SEATTLE 1, WASH.
1331 Third Avenue
Phone: Main 8372

PLANNING YOUR HOME FOR BETTER LIVING

By Clarence W. Dunham and Milton D. Thalberg. New York 18 (330 W. 42nd St.), Whittlesey House, 1945. 7¼ by 10 in. x + 278 pp. illus. $4.00.

Books written for the would-be home owner, full of information on how to plan, what to avoid, the dangers and the satisfactions, are becoming increasingly popular the closer we come to the expected home-building boom. Some of these books accomplish their purpose well: intended for the layman, they are written in understandable, but not oversimplified, terms, and give all, but no more than, the technical information required. Others seem to be based on the assumption that their readers are half-witted and never before have seen a house. This volume by Messrs. Dunham and Thalberg falls chiefly in the former group, but has occasional unhappy leanings toward the latter. It just isn't complimentary to one's readers, for example, to define such "architectural terms" as *story*, and to explain that "the land on which you are to build your dwelling is called a lot, or plot."

On the whole, however, this book has much to recommend it. Technical information is insinuated cleverly, so that it is absorbed almost unconsciously by the reader. Every phase of home building is covered; illustrations and floor plans are generous both in number and in size. There is an index. The style is direct and in general rather pleasing, with almost none of the "talking down" which is so frequently a part of semi-technical discussions intended for lay consumption.

Among the more unusual features is the inclusion of information on various building materials, with a comparison of their advantages and disadvantages. Another is the large number of diagrams illustrating principles of window placement, door hinging, and so on. It is too bad that more careful thought was not given to the design of the book itself—there is too much uniformity, not enough imagination.

COST MEASUREMENT IN URBAN REDEVELOPMENT

By Miles L. Colean and Arthur P. Davis. New York 18 (512 Fifth Ave.), National Committee on Housing, Inc., 1945. 9 by 12 in. 44 pp., tables and charts. $15.00.

The National Committee on Housing, in announcing this study by Messrs. Colean and Davis, say that it is "believed to be the first scientific effort to evaluate the effects upon cost of all the various interrelated factors in the problem." Certainly both the approach to the problem and the method of presentation are worthy of the term *scientific*—the study is full of formulas, tables and charts, all designed to provide an accurate measuring stick for the effect of variation in land cost, financial rate and taxes.

The authors do not claim that the study can give specific answers to the problems of individual housing projects; rather, they suggest that the tables will "be useful in limiting the field of inquiry usually necessary in project development." For a given site, for example, the report will indicate what results could be expected from redevelopment with (1) single detached houses, (2) row houses, or (3) three, six or 12-story multi-family houses. For each type of redevelopment there is a possible site plan, with floor plans and density statistics, cost of construction summary, construction outline, and other pertinent information. And finally there is a group of comparison charts, indicating at what point one type of building might be more advantageous than another.

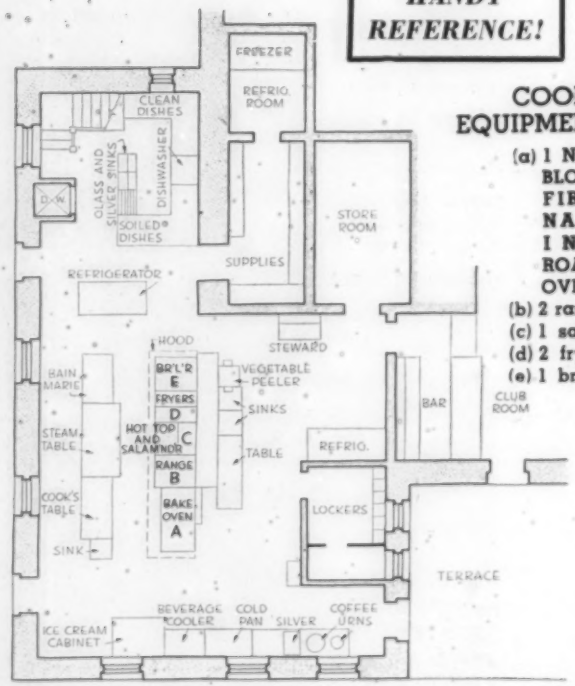
(Continued on page 144)

KITCHEN PLAN NO. 28:

Twenty-eighth of a series of successful mass-feeding kitchen plans.

The plan below is one which has been proposed and accepted for modernizing the kitchen of a country club in Pennsylvania. Designed to handle more than a thousand meals on any service day.

KEEP FOR HANDY REFERENCE!



COOKING EQUIPMENT USED:

(a) 1 No. 959 BLODGETT GAS-FIRED COMBINATION BAKING AND ROASTING OVEN
(b) 2 ranges
(c) 1 salamander
(d) 2 fryers
(e) 1 broiler

Designed by: Miss C. E. Wells, Victor V. Clodd Company, Philadelphia, Pa.

This layout is an excellent example of the utility of BLODGETT OVENS in modern kitchens. The NO. 959 BLODGETT OVEN in this installation has two sections, separately controlled, one with two baking decks, and one with a 12"-high roasting compartment. For details and specifications of BLODGETT OVENS, consult your equipment house or write

THE G. S. BLODGETT CO., Inc.
53 MAPLE STREET BURLINGTON, VERMONT

Reprints of this new series will soon be available to architects on request.

What A Rough Four Years

...And before we could take a deep breath, we were given another challenge—adapting *without delay* new developments, new techniques to civilian uses.

We like to think of our wires and cables as we think of the veterans now returning to civilian life. These veterans will not be the same people we sent off to war. They are battle-tested—they have grown up—they are ready to take on greater responsibilities than before.

Our wires and cables, too, are ready to take on new responsibilities. They have had to do jobs tougher than any wire ever faced . . . wherever the war took them—and it took them everywhere . . . moist, steaming jungle to bleak, frozen wastes. Whatever the conditions and demands—they came through the better for them.

What does this mean to the Architectural Engineer? Just this—a new and complete line of merchandise made up of such products as Building Wire with rubber, synthetic, and plastic insulations (including Laytex*—smaller in diameter and lighter in weight), Lead Cables, Royal Line of Rubber Jacketed Portable Cords and Cables, Non-Metallic Cables, Flexible Cords, and many others . . . all more highly developed, more efficient than ever before.

Yes, it was a tough four years . . . we learned a lot . . . and now our new knowledge belongs to you.

*Reg. U. S. Pat. Off.

U. S. ELECTRICAL WIRES AND CABLES

Serving Through Science

UNITED STATES RUBBER COMPANY

1230 SIXTH AVENUE • ROCKEFELLER CENTER • NEW YORK 20, N. Y.

 (Continued from page 14)

buildings, consider plans for an enclosed driveway adjacent to a garage or parking space.

7. Eliminate heavy doors. Where there are revolving outside doors, provide auxiliary swinging doors of light construction.

The program was drawn up by C. Herrick Hammond, supervising architect, State of Illinois; Edwin Green, of Lawrie & Green, Harrisburg, Pa.; and the late Col. John Holabird, Chicago architect.

COLLEGE NOTES

Residential Housing Course

Residential housing will be the main emphasis in the revised Elements of Architecture course offered in the fall by the School of Architecture, Western Reserve University, Cleveland.

Previous to its being offered last term at Cleveland College, Reserve's downtown center, the course had been directed primarily to students intending to become professional architects. At Cleveland College the course was experimentally directed toward the general public desiring a layman's knowledge of architecture and design.

Because of the wide interest in the revised course, this same purpose will be retained in the course as taught in the School of Architecture, opening in October. Students from any of the other schools of the university and anyone else interested will be permitted to enroll in the course. Simple freehand sketching which requires no previous experience will be included to acquaint students with the requirements of the simpler elements as fireplaces, exterior and interior walls, stairways and closets.

Evening Courses

Evening courses offered at Columbia University's School of Architecture this session include architectural design, construction, history and delineation. They are open to mature students interested in degree credit and to qualified special students not necessarily concerned with obtaining a degree.

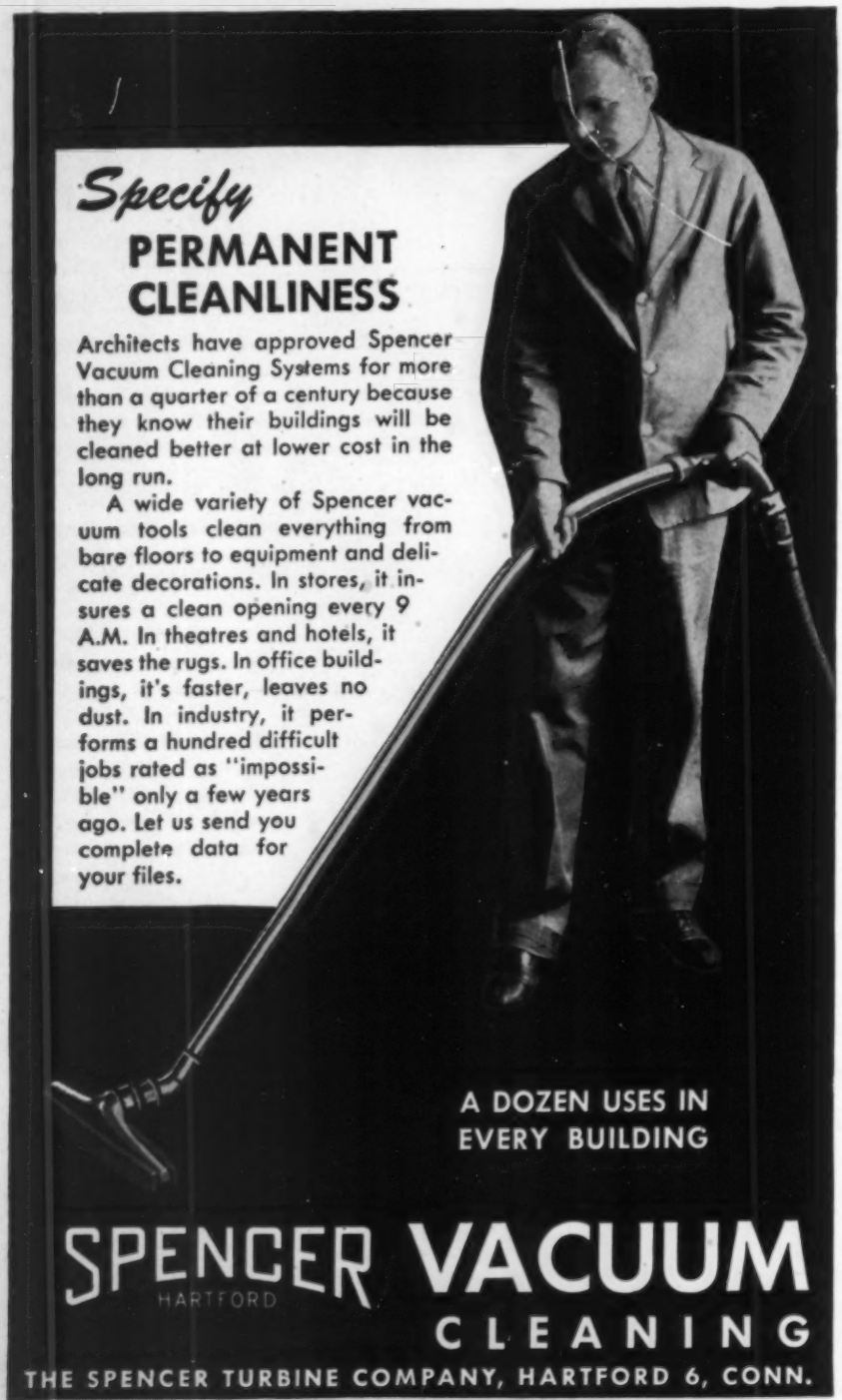
Among the several construction courses, one dealing with architectural materials and elementary principles of structure will be given by Mr. Harold R. Sleeper and Mr. Andre Helasz. A course in specification writing will also be given by Mr. Sleeper. Instruction in drawing and painting with special emphasis on architectural design study techniques and delineation will be given by Mr. Olindo Grossi.

For further information address the Secretary of Columbia University, New York City, or Prof. W. H. Hayes, Executive Director, Evening Classes in Architecture, 403 Avery Hall, Columbia University.

Heads Carnegie School

B. Kenneth Johnstone, professor and head of the department of architecture at the Pennsylvania State College, has

(Continued on page 132)


Specify
PERMANENT
CLEANLINESS
Architects have approved Spencer Vacuum Cleaning Systems for more than a quarter of a century because they know their buildings will be cleaned better at lower cost in the long run.
A wide variety of Spencer vacuum tools clean everything from bare floors to equipment and delicate decorations. In stores, it insures a clean opening every 9 A.M. In theatres and hotels, it saves the rugs. In office buildings, it's faster, leaves no dust. In industry, it performs a hundred difficult jobs rated as "impossible" only a few years ago. Let us send you complete data for your files.
A DOZEN USES IN EVERY BUILDING
SPENCER HARTFORD VACUUM CLEANING
THE SPENCER TURBINE COMPANY, HARTFORD 6, CONN.
256C

URGENTLY REQUIRED

For re-establishment of discharged service personnel: new or used copies of ARCHITECTURAL DRAFTING by Svenson and Shelton.

Address D. G. W. McRae, Supervisor, School of Architectural Drafting, Ontario Training and Re-Establishment Institute, 50 Gould St., Toronto, 2, Can.

WHAT PEOPLE REALLY WANT IS *Electrical Living*

THIS KITCHEN DESIGN SHOWS HOW TO GET SALES APPEAL WITH IDEAL ELECTRICAL LIVING

Here is a kitchen that readily reflects the efficiency, the economy, and the ease of *Electrical Living*—designed to win the enthusiastic approval of your clients. All through the house you can have this same strong appeal. Simply study the electrical requirements, room by room, and be sure that the necessary wiring to serve them is provided.

Use this new Handbook to give sales appeal to your wiring. This new Handbook provides all the data you require to design and specify efficient, modern wiring most economically. The most comprehensive reference book on home wiring ever produced. Contains 120 pages. Ten chapters. Scores of handy tables, charts and diagrams. Costs one dollar. Send your money to Westinghouse Electric Corporation, Extension Training —Industrial Relations Department, P. O. Box 1017, Pittsburgh 30, Pa.

J-91535

Westinghouse

PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

Better Homes Department

as a part of its consulting service, offers you the following FREE books: Electrical Living in 194X—Professional Edition; Manual of Better Home Wiring; and Better Living Means Electrical Living.

 (Continued from page 130)

been appointed director of the College of Fine Arts, Carnegie Institute of Technology. He will assume his duties November 1st, succeeding Glendinning Keeble, on leave of absence because of ill health.

Prof. Johnstone, a graduate in architecture from the University of Illinois, became a Fellow of the American Academy at Rome in 1932. He is president of the Central Pennsylvania Chapter, A.I.A., and treasurer of the Pennsylvania Society of Architects.

New Syracuse Dean

L. C. Dillenback, director of the School of Architecture, Syracuse University, has been named dean of the College of Fine Arts, at Syracuse. He will continue to carry on his responsibilities as director of the School of Architecture.

Dean Dillenback is a Fellow of the American Institute of Architects and a member of the consultants' panel on community development service for the New York State Division of Housing. He is also a director of the Association of Collegiate Schools of Architecture.

Gallion to California

Arthur B. Gallion, director of planning and construction for the Pacific Coast Region of the FPHA, has been appointed dean of the college of architecture, University of Southern California. He assumes his new duties this month.

School Moves

The Institute of Design, Chicago, has moved from 247-257 East Ontario St. to 1009 North State St., Chicago 10, Ill.

OFFICE NOTES

New Offices

Opening of the following new offices has been announced:

Harold H. Eaton, R. A., at 303 Bewley Bldg., Lockport, N. Y.

John Stafford Efford, architect, at 734 Central National Bank Bldg., Richmond, Va.

Isadore Rosenfield, architect and hospital consultant, at 19 W. 44th St., New York 18, N. Y.

Morgan Stedman, architect, at 180 University Ave., Palo Alto, Calif.

David M. Ward and William H. Conrad, architects, at 702 Swetland Bldg., 1010 Euclid Ave., Cleveland 15, Ohio.

Offices Reopened

Louis Lieberman, architect, has reopened his office at 44 Court St., Brooklyn 2, N. Y.

Massena & duPont, architects, have reopened their offices in their own building at 704 Delaware Ave., Wilmington, Del.

Edward L. Wilson and Joseph J. Patterson, architects, have reopened their offices at 209 Majestic Bldg., Fort Worth, Texas, after an interruption of four years.

New Addresses

Clark R. Ackley, architect, has moved his offices to 1811 E. Michigan Ave., Lansing 12, Mich.

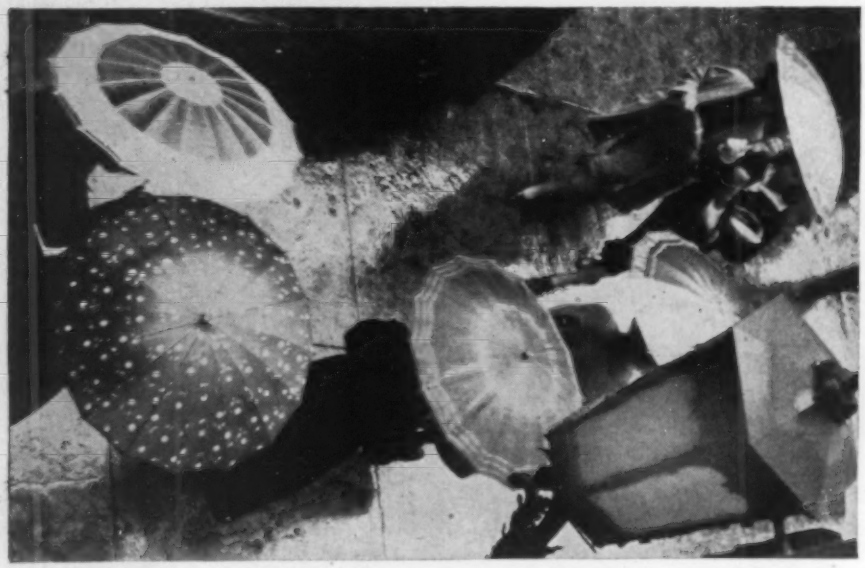
Joseph Bailey, A.I.A., has moved to Congress Bldg., Miami 32, Fla.

The New York offices of Francis Chilson, Industrial Consultant, have been moved to 101 Park Ave., New York.

Effective November 1st, the offices of James F. Eppenstein, Architects and Designers, will be located at 646 N. Michigan Ave., Chicago 11, Ill.

Robert Johnson, Inc., Building Construction, have moved their offices to 232 E. 36th St., New York 16, N. Y.

(Continued on page 134)



BUILDINGS NEED IT, TOO!

Buildings need protection against the proverbial "rainy day" . . . the day when fire or panic lashes the occupants into a rush for the exits.

When that day comes to a school, or theatre, or auditorium, the assurance of positive, instant exit can spell the difference between safety . . . and disaster.

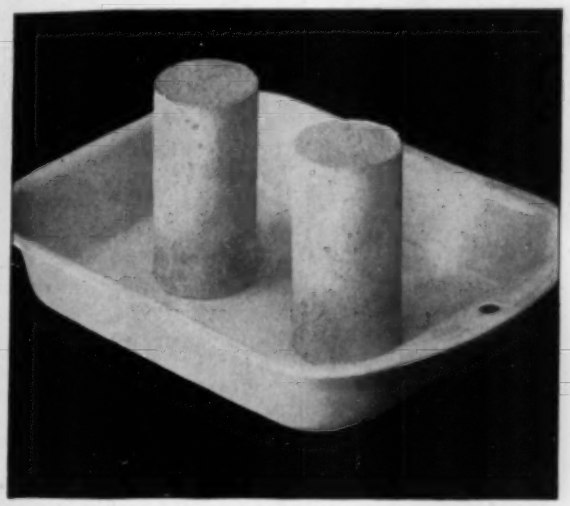
And such assurance is so simply secured!

It requires only your insistence that every exit door be equipped with genuine Von Duprin Self-Releasing Fire and Panic Exit Devices.

It's just as easy as that.

BRIXMENT MORTAR

Is More Durable



To compare the durability of two mortars, make a cylinder or block of each, let them "cure" for a month or so, then freeze and thaw them forty or fifty times, with a little water in the pan (the freezing unit of your electric refrigerator will do). Try this with Brixment mortar!

—AND DURABILITY MEANS

PERMANENT STRENGTH AND BEAUTY

For permanent strength and beauty, mortar must be *durable*—must be able to withstand the alternate freezing and thawing to which it is subjected many times each winter.

Brixment mortar *is more durable*. This greater durability is due partly to the strength and soundness of Brixment mortar, and partly to the fact that Brixment is waterproofed during manufacture. This waterproofing helps prevent the mortar from becoming saturated —therefore protects it from the destructive action of freezing and thawing.

Walls built with Brixment mortar therefore *retain* their original strength and appearance. . . . Even in parapet walls and chimneys, where exposure is particularly severe, Brixment mortar will almost never require repointing.

LOUISVILLE CEMENT CO., Incorporated, LOUISVILLE 2, KENTUCKY

CEMENT MANUFACTURERS SINCE 1830

William A. Keegan, Inc., have moved their office and garage to 411 Bergen Ave., Kearny, N. J.

Henry F. Ludorf, A.I.A., has moved to 100 Pearl St., Hartford 3, Conn.

Joseph Douglas Weiss, architect, has moved his office to 8 W. 40th St., New York 18, N. Y.

Equipment and Materials Reporter has moved to 124 W. Fourth St., Room 541, Los Angeles 13, Calif.

New Firms

Ernest H. Harder, Theodore Barbato and Felix A. Ciampa, consulting engineers, have announced formation of a partnership for the practice of structural engineering. Address, 140 Cedar St. (90 West St.), New York 6, N. Y.

Paul W. Jones, A.I.A., formerly a practicing architect in Minnesota and North Dakota, has formed a partnership with Arquitecto Ramon Corna, with offices at Monte Libano #670, Lomas de Chapultepec, Mexico City.

Thomas J. Pearson, John F. Alter, A.I.A., and Horace H. James announce their association in the firm of Pearson, Alter & James, Architects, successors to the office of James E. Allen, Architect. Address, 351 Essex St., Lawrence, Mass.

Herbert R. Simonds and Col. George S. Brady have formed Simonds and Brady, Consulting Engineers, with offices at 551 Fifth Ave., New York. The company will specialize in complete materials, production and market analyses of postwar products in plastics and other industrial materials.

Branch Office

Mr. A. C. Buensod, president of Buensod-Stacey, Inc., announces that their branch office at Charlotte, N. C., located at 1001 N. Church St., is now in full operation and Mr. R. O. McGary is now permanently located at Charlotte to carry out the work of the branch.

Firm Name Changed

Vernon F. Tinsley, Burdette Higgins and Clyde W. Lighter announce a change in their firm name and location from Tinsley, McBroom and Higgins, Architects, Hubbell Bldg., Des Moines, Ia., to Tinsley, Higgins and Lighter, Architects, Liberty Bldg., Des Moines, Ia.

Partnership Dissolved

Ben Schlanger, Architect, 595 Madison Ave., New York 22, announces that he has dissolved a recent partnership.

Joins Firm

George F. Axt, A.I.A., is now associated with the firm of Gannett Fleming Cordry and Carpenter, Inc., engineers, of Harrisburg, Pa., and New York City. Mr. Axt, a graduate of Pratt Institute, did graduate work in architecture at Harvard University. He will be manager of the company's New York office, 50 Broad St.

ENGINEERING SCHOLARSHIP

To promote education in the engineering field, the Independent Lock Co., Fitchburg, Mass., is offering a $500 annual scholarship to outstanding male students in the Fitchburg High School. To be known as the Morris Falk Engineering Scholarship, in honor of the president of the company, the award will total $2,000, to be paid at the rate of $500 yearly.

ART SOCIETY ELECTS

Charles C. Platt, a partner of the New York architectural firm of F. P. Platt & Brothers, has been elected

(Continued on page 140)

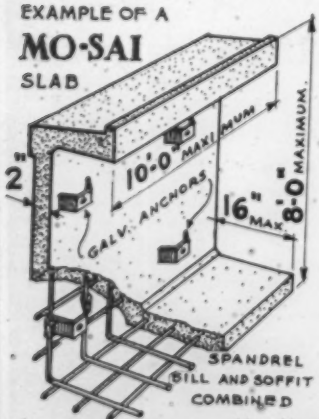
2000 SQ. FT. OF COLORFUL MO-SAI FACING SLABS ON THIS MODERN BUILDING

Mo-Sai

Decorative Masonry Facing Slabs

FOR NEW AND OLD BUILDINGS

EXAMPLE OF A MO-SAI SLAB



MO-SAI is a 2" THIN exposed quartz, granite, and vitreous aggregate slab available in a wide and interesting variety of colors. It is pre-cast in units to your specifications. Sizes up to 100 sq. ft., and more, per unit. Provides the greatest freedom of design with an assurance of the maximum structural soundness.

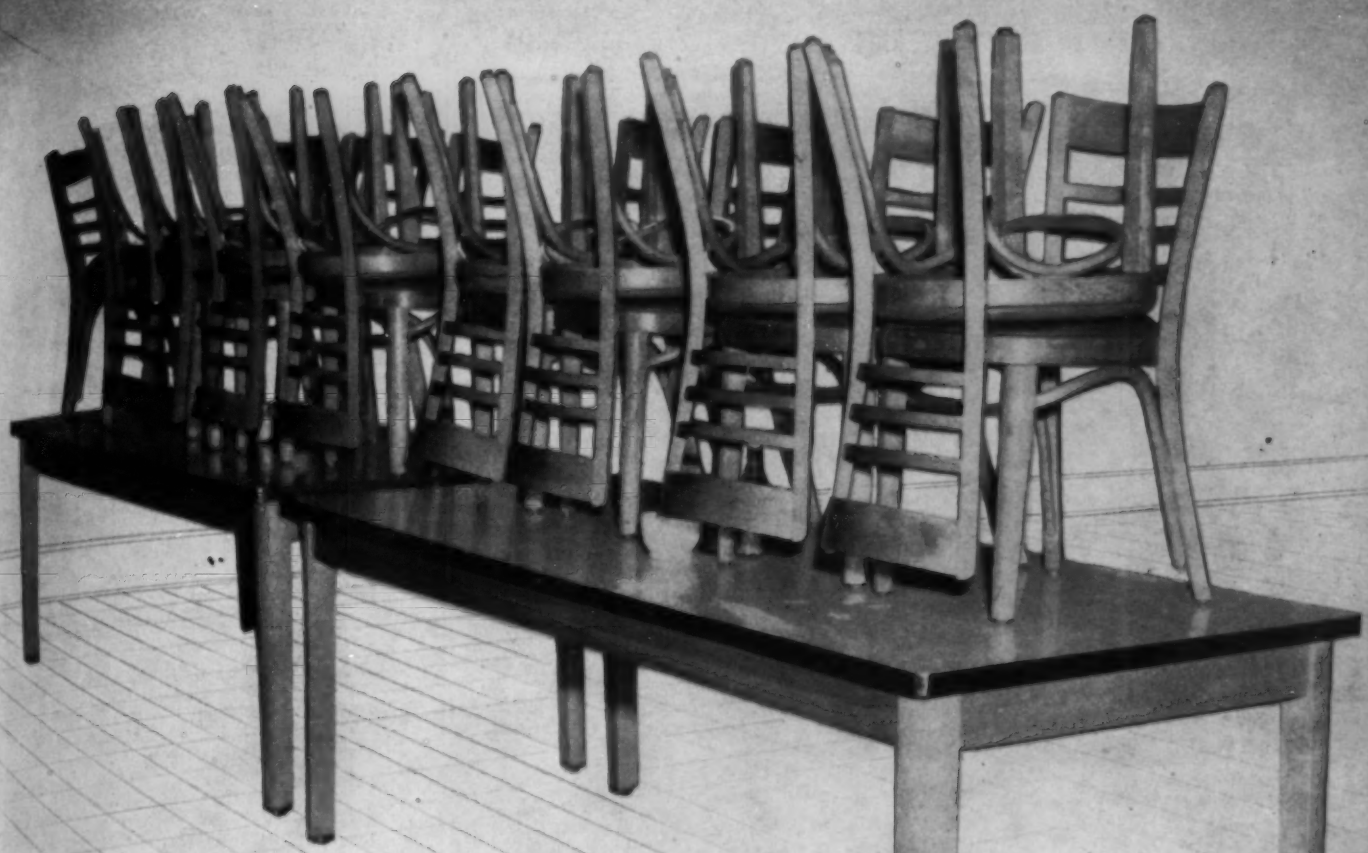
We will be glad to send you a catalog with color plates and complete data.

MO-SAI ASSOCIATES

New Haven, Conn.....The Dextone Co.....P. O. Box 606
Boston, Mass....Cambridge Cement Stone Co.....156 Lincoln St.
Philadelphia, Pa.....Formigli Arch'l Stone Co.....R. E. Trust Bldg.
Richmond, Va.....Economy Cast Stone Co.....P. O. Box 1223
Greensboro, N. C.....Arnold Stone Co., Inc.....P. O. Box 477
Oshkosh, Wisc.....Badger Concrete Co.....191 Marion St.
Salt Lake City, Utah....Otto Buehner & Co. 640 Wilmington Ave.

SEE OUR CATALOG IN SWEET'S

Mo-Sai MO-SAI ASSOCIATES, founded to standardize and improve architectural slabs. The trade mark "Mo-Sai" Reg. U.S. Pat. Off. is the property of The Dextone Co.



FOR NAVY MOP-UP OPERATION NO. 2,168.....

THE chairs in the mess hall at the U. S. Naval Hospital, St. Albans, Long Island, are shown above stacked on the G-E Textolite table tops. They have been put up on those same tables 2,168 times, we estimate, and yet the tables look as good as new. No harm has been done, for Textolite's hard, smooth surface is shock-, scratch-, and wear-resistant. But this is only one of its virtues.

From a sanitary standpoint Textolite is ideal. It can be cleaned with hot water and even sterilized with disinfectants and steam; burning cigarettes, oils, hot dishes, all foods and condiments have no effect on it.

Now add attractive color and pattern to this same material and the result is beauty plus durability . . . . truly a desirable combination for table and counter tops in thoroughly modern restaurants, shops, cocktail bars, trains, ships and public buildings.

For further information write Section E-22, General Electric Company, Plastics Divisions, One Plastics Avenue, Pittsfield, Mass.

GENERAL ELECTRIC

vantages claimed. 4 pp., illus. Aircraft Screw Products Co., Inc., 47-23 35th St., Long Island City 1, N. Y.

STEEL CONSTRUCTION

The Rigid Steel Standard Building. Describes a recent development in the field of prefabricated standard steel buildings. 8 pp., illus. National Machine & Foundry Co., Pittsburgh, Pa.

STORE FRONTS

Machines for Selling and *The Architect and "Machines for Selling!"* Two booklets on the use of store fronts as retail advertising medium, with illustrations of typical store problems and their solution. The second booklet explains the services to architects which the company offers. 16 pp., illus.; 16 pp., illus. The Kawneer Co., Niles, Mich.*

Know your
WIREMOLD
FUNCTIONAL WIRING
FOR BUILDINGS OF TODAY AND TOMORROW
WHAT TO USE.
PANCAKE
WIREMOLD
No. 1500
Capacity: 4 No. 12's
No. 2600
Capacity: two 26-pair telephone inside wiring cables.
WHERE TO USE IT:
Wherever overfloor installation of wiring for light and power or telephone circuits is required and frequent changes in location and number of outlets is expected... in offices, drafting rooms, factories, etc. Especially designed to meet telephone company requirements.
HOW TO USE IT...
The diagram shows section of a typical office layout for telephone connections to desks. Wiremold is quickly and easily installed. A few, well designed fittings take care of all requirements. Cross section of Pancake is very compact with low ramp angle . . . safe, strong and trip-proof.
2617T Showing Cut-out for moulding
2617T Telephone Elbow used back to back
2642H Telephone Outlet
No. 2600
No. 2600
No. 1500
1524A Telephone Outlet
HOW TO GET MORE DETAILED INFORMATION
Write THE WIREMOLD COMPANY HARTFORD 10, CONN.
SEE OUR CATALOG IN SWEET'S
We shall be glad to send you Pancake Bulletins and Engineering Data Sheets covering installation. Write direct to
THE WIREMOLD COMPANY
HARTFORD 10, CONN.

STOVES

Shipmate Restaurant and Hotel Ranges (Catalog No. 45). Sixteen ranges illustrated and described, with complete technical information. 16 pp., illus. The Stamford Foundry Co., Stamford, Conn.

TEMPERATURE CONTROLS

Electric Controls for Heating, Ventilating, Air Conditioning and Industrial Applications. Describes units of control apparatus and motor-operated valves. Includes tables of sizes and types of equipment. 4 pp., illus. Barber-Colman Co., Rockford, Ill.*

WINDOWS

Hope's Metal Windows—Modular Types & Sizes. A catalog of metal windows in the types and sizes approved by the Metal Window Institute. Hope's Windows, Inc., Jamestown, N. Y.*

New Modular Standard Ponderosa Pine Stock Windows and Sash (Manual WSS-45). A modular standard for wood windows, with sizes conforming to requirements of A.S.A. Project A62. Includes installation and construction details, complete diagrams and tables. 32 pp., illus. National Door Mfrs. Assn., 332 S. Michigan Ave., Chicago 4, Ill.*

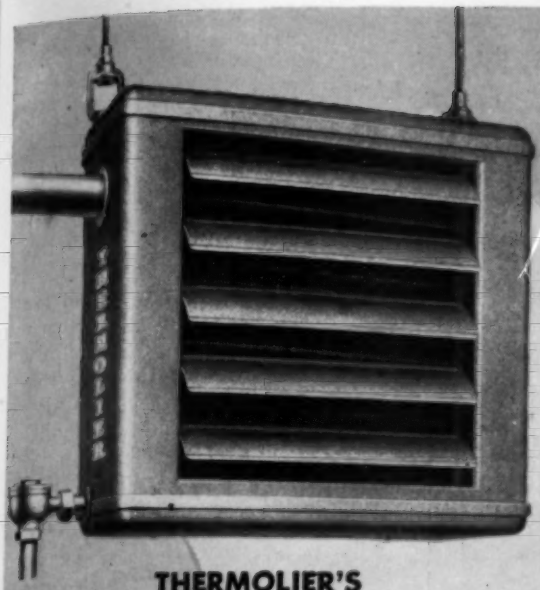
WOOD

New Jobs in Our Town that can best be built of Wood. Illustrates the varied types of new buildings needed throughout the country, shows typical structures built with the Teco Connector System and lists buildings by type using Teco Connectors. Includes design information and an article on termite protection. 20 pp., illus. Timber Engineering Co., 1319 Eighteenth St., N. W., Washington 6, D. C.

The Forest Industries Blaze New Trails. A report on wood research projects and developments such as plastics from impregnated sawdust, chemical bending and seasoning of wood, tests of flat timber trusses under long-time loading. 36 pp., illus. Timber Engineering Co., 1319 Eighteenth St., N.W., Washington, D. C.

WOODWORK

Today's Idea House. Doors, windows and woodwork, with special emphasis on the functional aspect. One section is devoted to closets and storage space, another to the use of doors to save fuel. Illustrates stock sizes of doors and windows. Gives guide to casement designs, information on frames, suggestions for handling and caring for woodwork. 32 pp., illus. Ponderosa Pine Woodwork, Chicago, Ill.



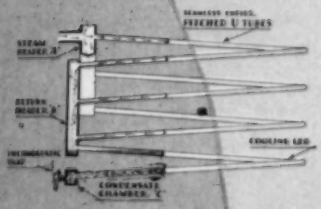
THERMOLIERS
are back again!

Whether you are planning new construction or renovation of an existing building, here is good news for you. GRINNELL is making THERMOLIERS again. They are the same efficient unit heaters that have been delivering more heat at less cost for thousands of satisfied customers for years.

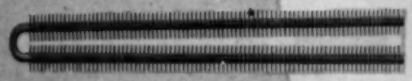
Talk over your heating problems with a Grinnell Engineer. He'll show you how Thermoliers distribute heat uniformly to every square foot of your buildings and save up to 27% of still-scarce fuel.

Thermolier's 12 points of superiority make them the logical choice in unit heaters. Ask for the new Grinnell Thermolier catalog 6-E. It gives all the details of construction, application, capacities and installation. Grinnell Company, Inc., Executive Offices, Providence 1, R. I. Branch offices in principal cities.

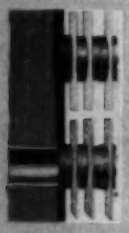
THERMOLIER'S SUPERIOR FEATURES



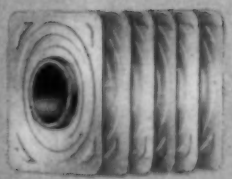
INTERNAL COOLING LEG assures continuous drainage of condensate and makes a simple thermostatic trap practical. It is equal to a run of more than 100 feet of ordinary exterior cooling leg piping.



BUILT-IN EXPANSION PROVISIONS. The "U" type tubes allow expansion and contraction, ease damaging strains.



LEAKPROOF TUBE-TO-HEADER CONSTRUCTION. Joints made by the expanding method assure safety and durability.



SUPERIOR HEATING ELEMENT. Square copper fins an strong seamless copper tubing provide 24% more radiating surface.

Other Points of Thermolier Superiority

Tube design minimizes dirt collection • built-in drainage • continuous rated capacity • heavy frame gives greater rigidity • motor and fan meet specific Thermolier requirements • simple piping connections • adjustable hangers facilitate erection • packed for easy installation.

GRINNELL

Thermolier Unit Heaters

FOR FULL VALUE FROM FUEL DOLLARS

 (Continued from page 28)

war lines, with limited production of 10 and 30 gal. single unit models; 30, 40, 52 and 86 gal. twin unit models, all in round galvanized tanks; and a 30 gal. capacity table-top model for "complete kitchen built-in" installation.

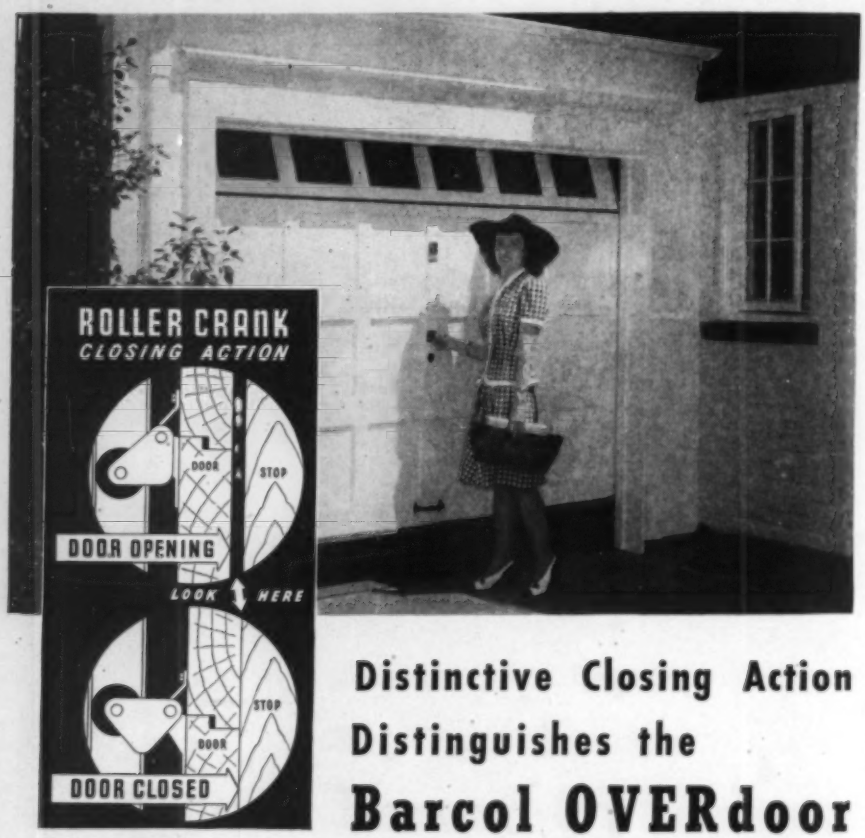
Electric Appliances

Westinghouse Electric Appliance Division has announced resumption of production of electric irons, roasters, electric refrigerators, electric ranges, and the Laundromat automatic cycle washer. Within the next two months electric heaters, waffle bakers, percolators and sandwich grills will also be started into production.

General Electric Co.'s household electrical appliance line as announced shortly after V-J Day is complete except for sunlamps, but the number of models available in each line is generally limited. Production of electric clocks, irons, portable heaters, ranges, water heaters, washers, rotary ironers and refrigerators is already under way.

Electric Ranges

Electric ranges will not be readily available to the general public until the latter part of 1946, according to Edison General Electric (Hotpoint) Appliance Co., although limited civilian production under the WPB quota for 1945 will be under way soon. The first ranges scheduled by this company will be in three models: the Hotpoint Masterpiece RC-8 de luxe; the Hotpoint Hostess RB-17, a moderate-priced model; and the Hotpoint Century RC-15, to sell in the lowest price class.



Distinctive Closing Action Distinguishes the Barcol OVERdoor

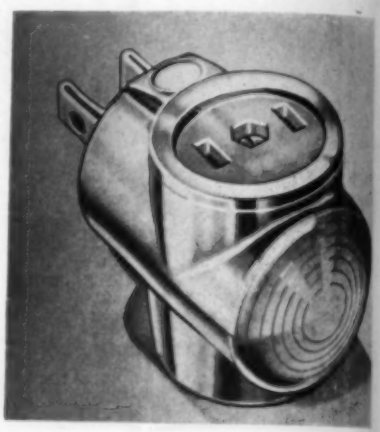
BARCOL

WEATHERTIGHT, yet EASY-WORKING—these outstanding qualities of the Barcol OVERdoor are largely due to a unique closing action, the operation of which is illustrated by the inset drawing above. "Roller Cranks" at each hinge are arranged in such a manner that the door is moved forward as a unit to seat snugly and firmly against the stop strips just as it completely closes. By a reversal of this action, when you go to open the door, it moves clearly away from the stop strips as it starts upward—and stays clear during its entire travel. In this way the highly desirable advantages of both free motion *and* tight closing are successfully achieved. This not only means that the Barcol OVERdoor opens and closes easily without sticking or binding, but it assures a well-fitted, rattleproof door that will keep out cold and dirt. *Let your Barcol Representative give you a demonstration of the "Roller Crank" Closing Action.*

Barcol OVERdoors
Electric Door Operators
Switch Controls
Radio Control

FACTORY-TRAINED SALES and SERVICE REPRESENTATIVES IN PRINCIPAL CITIES

BARBER-COLMAN COMPANY
102 MILL ST. • ROCKFORD, ILL.



Lighted wall plug with dual function

LIGHTING NEWS

Lighted Wall Plug

An electrically lighted wall plug, the *LumiNite Safety Pilot Plug*, is a combination cord cap, convenience outlet and safety pilot or night light. It is encased in an ivory plastic housing that plugs into any prong type wall electrical outlet. A small bulb inside the housing provides a pilot light for locating wall receptacles, and doubles as a night stafety light.

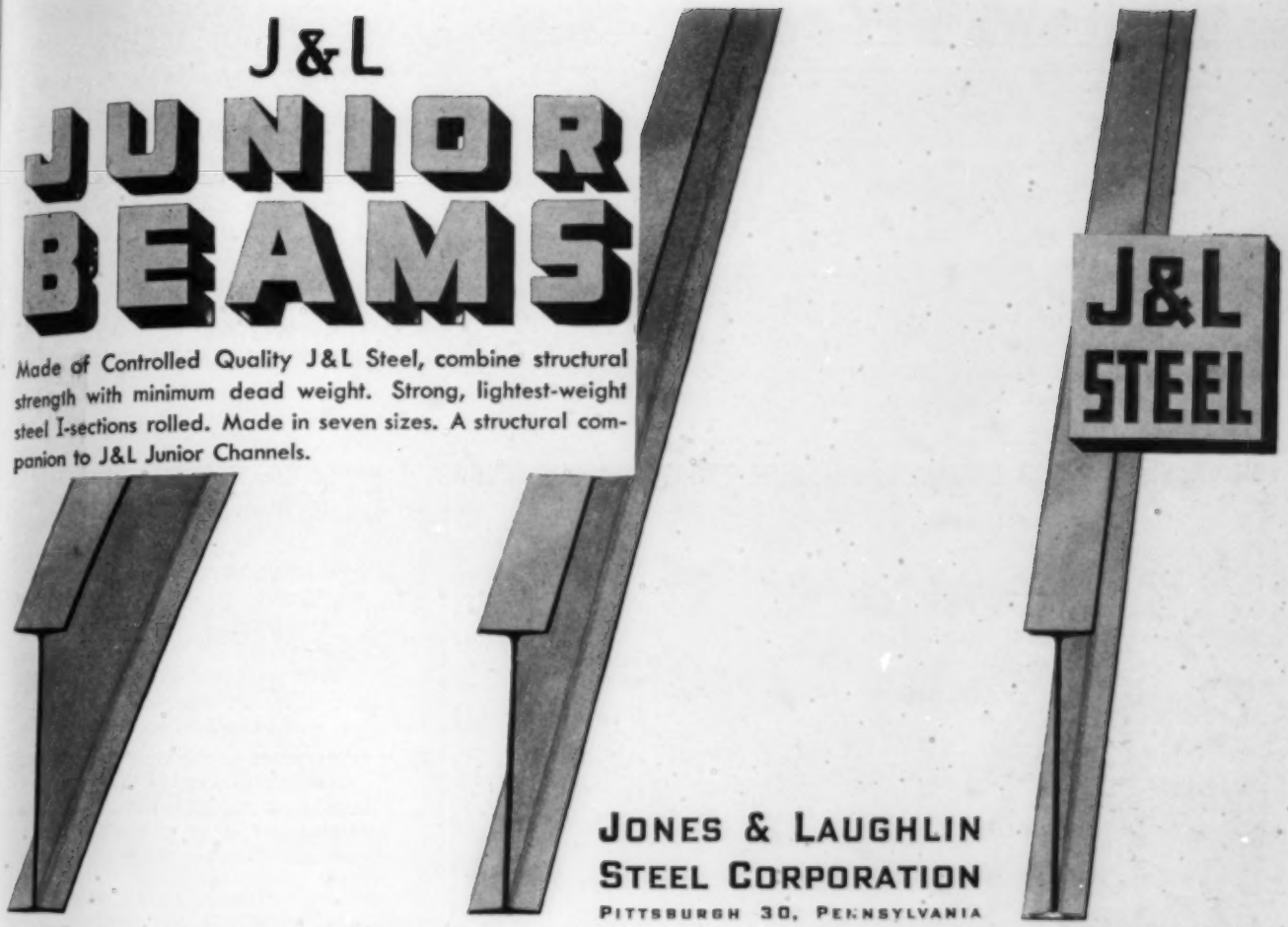
The plug provides two outlets for plugging in other electrical fixtures. It can also be adapted as a cap for the end of the cord to electrical devices by tapping out a special round thin section and inserting the end of the fixture cord. Associated Projects Co., 80 E. Long St., Columbus 15, Ohio.

New Fluorescent

Curved glass panels the full length of the new *Jefferson Permaflector Fluorescent Luminaire* (#1240) add much to the appearance of the unit and at the same time, it is claimed, provide adequate shielding. All metal parts of the Jefferson are die-formed, reflecting surfaces are sprayed heat-resistant baked-on enamel permanently bonded to steel base. Pittsburgh Reflector Co., Oliver Bldg., Pittsburgh 22, Pa.

J&L JUNIOR BEAMS

Made of Controlled Quality J&L Steel, combine structural strength with minimum dead weight. Strong, lightest-weight steel I-sections rolled. Made in seven sizes. A structural companion to J&L Junior Channels.



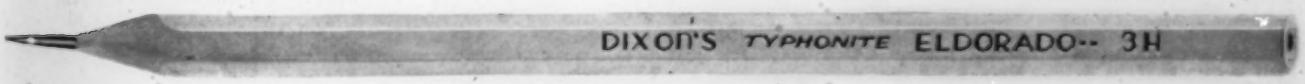
JONES & LAUGHLIN
STEEL CORPORATION
PITTSBURGH 30, PENNSYLVANIA

"WHAT GOES ON!" I BELLOWED,

"I might as well use a wooden spoon!"

We know how it is, Tom. Blurs and uneven lines and headaches. Use Typhonite Eldorado. How that pencil can draw! Crisp, sharp, dense lines — brilliant and true. No feathering or crumbling in the softer degrees; no grit in the harder degrees. Nice going!

And get this, Tom—Eldorado is dependably uniform in all degrees. A 2H is a 2H today, tomorrow and always! Eldorado is a sweet pencil. Try it! Send for a free Comparison Sample *now*. Request it on your business or professional stationery, specifying degree.



DIXON'S TYPHONITE
ELDORADO

PENCIL SALES DEPT. 225-J10, JOSEPH DIXON CRUCIBLE COMPANY, JERSEY CITY 3, N. J.

president of The Municipal Art Society, New York City. Other officers elected are Alfred Geiffert, Jr., vice president; A. F. Brinckerhoff, secretary; and Fletcher Collins, treasurer.

Mr. Platt has been chairman of the Mayor's Committee on Property Improvement, is a member of the New York Building Congress, the Citizens' Housing Council, and co-chairman of the Zoning Committee of the New York Real Estate Board. He is past vice president of the New York State Association of Architects, and present co-chairman of its Committee on Public Works; past secretary and director of the New York Chapter, A.I.A.; director of the Architectural League.

ART COMMISSION

Following in the lead of Philadelphia, Columbus, Ohio has recently set up an Art Commission to "guard, advise, guide and suggest" improvements in the appearance of the city.

Members of the Commission, appointed by Mayor James A. Rhodes from a list of nominees selected at public meeting, are: Noverre Musson, architect; Hoyt Leon Sherman, painter; Erwin F. Frey, sculptor; Charles Sutton, landscape architect; the director of the Columbus Gallery of Fine Arts (new director not yet appointed); Edwin Zepp, landscape architect.

FOLEY HEADS N. Y. BUILDING CONGRESS

M. H. Foley, A.I.A., of the architectural firm of Voorhees, Walker, Foley & Smith, New York, has been unanimously elected president of the New York Building Congress to fill the unexpired term of J. Andre Fouilhoux, who was killed in an accidental fall in June. Mr. Foley was president of the Building Congress from April 23, 1940 until Mr. Fouilhoux took office in May, 1942, but was out of the country on business for a year and a half of his term of office.

(Continued on page 142)

FOR ARCHITECTS AND ENGINEERS PLANNING TODAY FOR TOMORROW

Standard Elevator and Dumb Waiter Specifications

FREIGHT ELEVATORS

HOSPITAL ELEVATORS

SIDEWALK ELEVATORS

RESIDENCE ELEVATORS

ELECTRIC AND HAND POWER DUMB WAITERS

HAND POWER ELEVATORS

Mail coupon for your copy

Here's a 24-page, easy-to-read, helpful elevator and dumb waiter specification book for postwar planning architects and engineers. It contains complete specifications covering the Sedgwick line of electric and hand power elevators and dumb waiters—describes in detail the machine, motor, brake, operation, control and lists other pertinent information needed by those who specify vertical transportation equipment.

This book of "Standard Specifications for Elevators and Dumb Waiters" will be mailed—without obligation. Just mail the coupon for your copy.

SEDGWICK MACHINE WORKS, 142 W. 15th St., New York 11, N. Y.

ELEVATORS • ROTO-WAITERS • SPECIAL LIFTS • DUMB WAITERS

Sedgwick Machine Works
142 West 15th Street, New York 11, N. Y.
Gentlemen: Please send me a copy of "Standard Specifications For Elevators And Dumb Waiters"

NAME.....

COMPANY.....

ADDRESS.....

CITY..... ZONE..... STATE.....

OPPORTUNITIES AVAILABLE

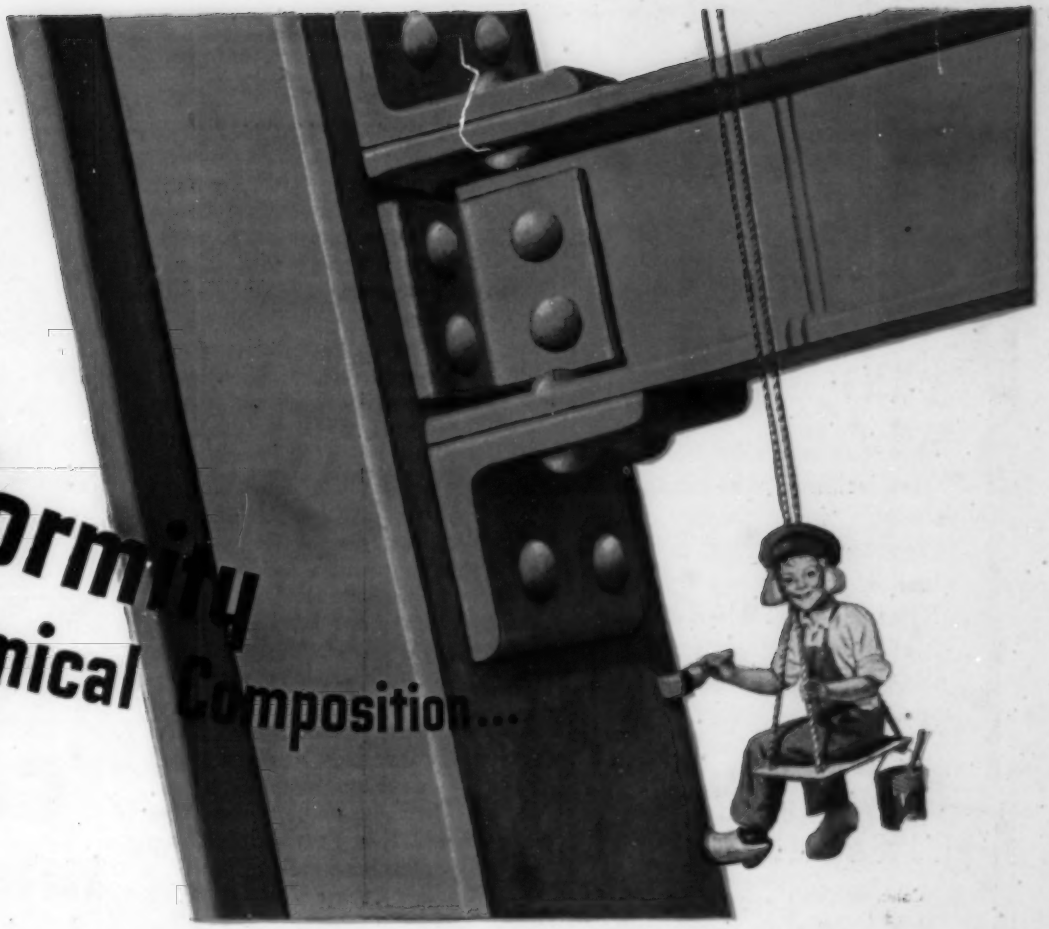
ARCHITECTURAL DESIGNERS: structural, heating and ventilating, and electrical engineers. Experienced men for nationally known midwestern firm of architects and engineers. *Box 64,* ARCHITECTURAL RECORD, *119 West 40th Street, New York 18, N. Y.*

STORE PLANNERS: draughtsman for planing and designing store interiors. Must be familiar with store fixture work for Designer's office located in New York. State age, experience and salary required. *Box 66,* ARCHITECTURAL RECORD, *119 West 40th Street, New York 18, N. Y.*

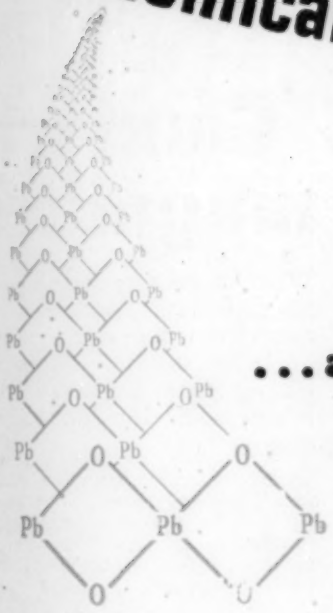
ARCHITECTURAL DESIGNERS. We have splendid opportunity for several architectural designers for modern exteriors and interiors. E. PAUL BEHLES & ASSOCIATES, *11 West 42nd Street, New York 18, N. Y.*

WANTED: Chief Architect. Large corporation having continuous building operations in and near Los Angeles for past twenty years, and continuous future likewise assured. Construction highest quality; wide variations in style and use. Occasional trip to Europe, expenses paid. Competent staff of draftsmen, excellent working facilities. Applicant must qualify as executive and have proven ability as designer. Should possess necessary qualifications to later pass California State examination for certificate to practice architecture. A unique, delightful position. Do not apply unless you know you can "fill the bill." Write letter to Box No. 68 detailing education, training, experience, age, family, general qualifications and salary desired. Not necessary but advisable to include snapshot or photograph. *Box 68,* ARCHITECTURAL RECORD, *119 West 40th Street, New York 18, N. Y.*

(Continued on page 142)



Uniformity of Chemical Composition...



...another real reason why RED LEAD means Extra Protection against Rust

Red Lead's outstanding uniformity of performance results not only from its extreme purity but also from its precise chemical composition... lead orthoplumbate. This makes for predictable chemical behavior.

For many years Red Lead has been the standard among metal protective paints because of inherent fundamental properties of the pigment itself.

Among the most important of these is Red Lead's definite chemical composition and uniformity—as distinguished from pigments which have indefinite composition or vary from batch to batch, with resulting possibility of variation in performance.

One reason for this uniformity is that Red Lead is a simple chemical compound, being made from oxygen and high purity metallic lead. Consequently, Red Lead is an extremely pure compound. It contains no corrosion accelerating impurities such as water-soluble salts of chlorides or sulfates.

Uniform composition means dependable performance, day after day, job after job.

Furthermore, Red Lead has the property of counteracting acid conditions, recognized as accelerators of rust. In the presence of various acids, Red Lead forms insoluble neutral lead salts at the approximate rate at which the acids are supplied. This is true whether the acids originate from acid forming environments, such as gas, smoke and moisture in the atmosphere, or from the decomposition of the vehicle. Thus, a rust inhibiting condition is maintained with a Red Lead paint.

Remember, too, that Red Lead is compatible with practically all vehicles commonly used in metal protective paints, including phenolic and alkyd resin types.

Specify RED LEAD for All Metal Protective Paints

The value of Red Lead as a rust preventive is most fully realized in a paint where it is the only pigment used. However, its rust-resistant properties are so pronounced that it also improves any multiple pigment paint. No matter what price you pay, you'll get a better paint for surface protection of metal, if it contains Red Lead.

Write for New Booklet

"Red Lead in Corrosion Resistant Paints" is an up-to-date, authoritative guide for those responsible for specifying and formulating paint for structural iron and steel. It describes in detail the scientific reasons why Red Lead gives superior protection. It also includes typical specification formulas. If you haven't received your copy, address nearest branch listed below.

* * *

The benefit of our extensive experience with metal protective paints for both underwater and atmospheric use is available through our technical staff.

NATIONAL LEAD COMPANY: New York 6, Buffalo 3, Chicago 80, Cincinnati 3, Cleveland 13, St. Louis 1, San Francisco 10, Boston 6 (National-Boston Lead Co.); Pittsburgh 30 (National Lead & Oil Co. of Penna.); Philadelphia 7 (John T. Lewis & Bros. Co.)

DUTCH BOY RED LEAD

There is NO SUBSTITUTE for EXPERIENCE

METALCRAFT

CAST BRONZE

Our facilities are promptly available for estimates and execution on all types of cast bronze castings — Letters, Name Plates, Tablets, Signs, Memorials, Markers, Sun Dials, etc. Let us figure with you.

DESIGN AND FABRICATION

Calendar Cases
Card Frames
Check Desks
Collapsible Gates
Counter Railings
Doors
Elevator Cabs
Entrances
Gates Grilles
Letters and Numerals
Lighting Stands
Marquise
Name Plates
Railings
Safe Deposit Enclosures
Signs Tablets Wickets

IN ALL METALS

For details of Metalcraft Service, we refer you to Sweets 1945 Architectural File.

Remember THIS NAME for QUALITY WORKMANSHIP DEPENDABILITY

METALCRAFT

CINCINNATI METALCRAFTS Inc.

DEPT. AR, 34TH AND ROBERTSON
CINCINNATI 9, OHIO

THE RECORD REPORTS

(Continued from page 140)

COMPETITION ANNOUNCED

"Georgia Builds," an architectural competition offering prizes totaling $10,000, has been announced by Rich's, Inc., Atlanta department store, sponsors, in collaboration with *Pencil Points*. The problem calls for a small postwar house for a family living in Georgia. For copies of the program, address *Pencil Points*, 330 W. 42nd St., New York 18. The competition closes January 21, 1946.

COMPETITION WINNERS

The winners in the Architectural Competition for designs for the proposed new sanatorium to be erected at Ballyowen, Lucan, Co. Dublin, Eire, have been announced as follows:

First Place (£500), John G. Manahan and L. P. Peppard, both of Dublin;

Second Place (£350), Messrs. Nicol Nicol & Thomas and Donald G. Walton, of Birmingham, England;

Third Place (£250), Donald Dex Harrison and Miss Penelope Whiting, both of London, England;

Fourth Place (£150), The Grenfell Baines Group of Architects, Preston, Lancashire, England;

OPPORTUNITIES AVAILABLE

(Continued from page 140)

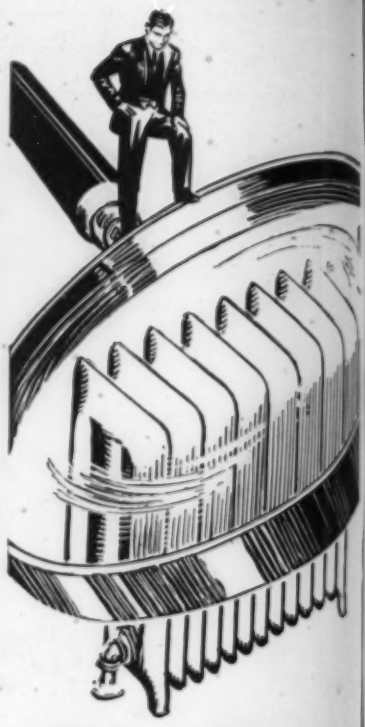
WANTED: A Public School Architect. Duties are to draw up specifications and supervise repair work on public school buildings; also, plan for new buildings when the occasion arises. Write to LOWELL W. JOHNSON, *Superintendent of Schools, Butte, Montana.*

Men Wanted: ARCHITECTURAL DESIGNER, DRAFTSMAN, qualified to assume responsibilities and develop creative work. Permanent employment and opportunity for advancement in progressive office having large volume of public and private work. Submit full qualifications, experience record and samples of work with first application. DAVID H. HORN, *Architect, Rowell Building, Fresno, California.*

WANTED: Experienced Architectural Designer and draftsman for office engaged in general practice of architecture located in Houston, Texas. State full particulars and salary desired.
Box 70, ARCHITECTURAL RECORD, *119 West 40th Street, New York 18, N. Y.*

SITUATION WANTED

Registered Architect, 37 years old, graduate Carnegie Tech., with thirteen years general experience, including own practice, would like to contact firm or individual desiring associate who can produce and earn.
Box 72, ARCHITECTURAL RECORD, *119 West 40th Street, New York 18, N. Y.*



Comfort-magnified!

When a heating system provides the correct temperature at the correct time (more steam on coldest days; less steam on mildest days), with a great saving in fuel, and does it automatically—*that's* comfort, magnified!

The Webster Moderator System of Steam Heating supplies the correct amount of steam to each radiator to agree with exposure and changes in outside weather conditions. It is automatically "Controlled-by-the-Weather".

There are just four control elements in the Webster Moderator System: an Outdoor Thermostat, a Main Steam Control Valve, a Manual Variator and a Pressure Control Cabinet. They assure comfort and economy at all times, under all conditions.

More Heat with Less Fuel

Seven out of ten large buildings in America (many less than ten years old) can get up to 33 per cent more heat out of the fuel consumed! . . . A book "Performance Facts" gives case studies—*before* and *after* figures—on 268 Webster Steam Heating installations. Write for it today. Address Department AR-10.

WARREN WEBSTER & CO., Camden, N. J.
Pioneers of the Vacuum System of Steam Heating
Representatives in principal Cities : : Est. 1888
In Canada, Darling Brothers, Limited, Montreal

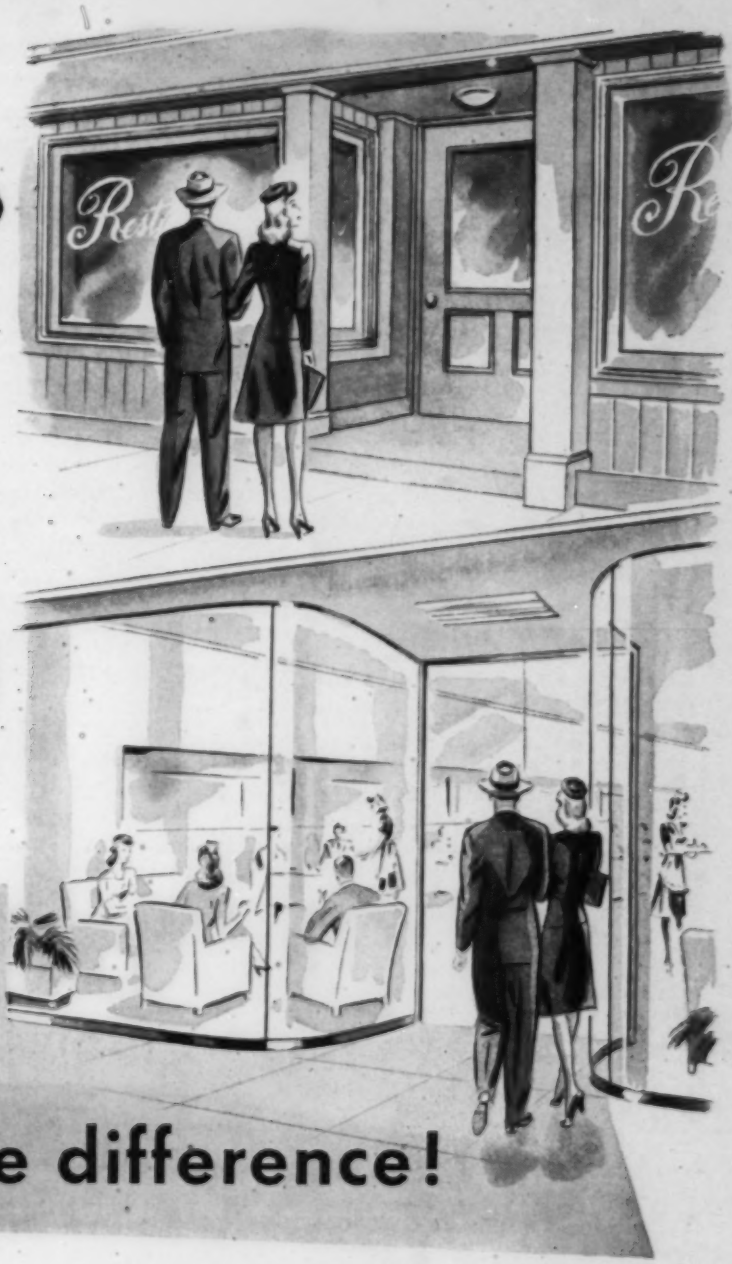
Fuel-Saving Starts With CONTROL

AUTOMATIC Webster Heating Systems

Puzzling?

OR

Inviting!



THE VISUAL FRONT makes all the difference!

The fact that people are fussy about where they eat is no news to a restaurant man. But it's important to him none the less . . . and hence to you.

So—let people *see* what kind of a restaurant it is. Display its color and charm—open the front with clear glass to capitalize on this eye-catching asset.

People like pleasant surroundings when they eat—and you can't beat glass for providing cheer. A front of clear glass floods the interior with daylight, extends a bright invitation at night. Walls of colorful Vitrolite structural glass are always fresh, for they clean easily without losing their luster.

People like comfort, too. Thermopane, the window-pane that insulates, enables you to have a Visual Front, without excessive heat loss in winter. In summer, Thermopane helps keep out heat, reducing the load on air conditioning equipment. Thermopane is a multiple-glass unit, with a dead air space hermetically sealed between the panes of glass. Only two surfaces need be cleaned.

Before you design your next restaurant, get the facts about Thermopane and the many other types of glass for storefronts. Write for our Visual Front booklet. Libbey·Owens·Ford Glass Company, 72105 Nicholas Building, Toledo 3, Ohio.

VISUAL FRONT

LIBBEY·OWENS·FORD
a Great Name in **GLASS**